# Service Manual

## MOBILE CAR VCR

Rev. Jan29,2002A.

# SPECIFICATIONS

| | |
|---|---|
| **SYSTEM** | |
| Video Signal | NTSC-M |
| **VIDEO** | |
| Input | 1.0Vpp, 75 ohms, unbalanced |
| Output | 1.0Vpp, 75 ohms, unbalanced |
| Recording system | Rotary two-head helical scan |
| Signal to Noise ratio | More than 43dB (for NTSC-SP) |
| | More than 41dB (for NTSC-EP) |
| Horizontal Resolution | 220 Lines (for NTSC-SP) |
| | 210 Lines (for NTSC-SP) |
| **AUDIO** | |
| Input | -8.8dBm, 47k ohms Minimum |
| Output | -5.8dBm ± 2 dBm(1kHz), 1k ohms Maximum |
| Frequency Response | 20Hz ~ 20kHz(for PAL Hi Fi SP/EP) |
| Signal to Noise Ratio | 68dB Minimum (SP/EP, Hi Fi) |
| | 42dB Minimum (SP, Mono) |
| Audio Distortion | 0.7% Maximum (SP/EP, Hi Fi) |
| | 4.0% Maximum (SP, Mono) |
| **TAPE TRANSPORT** | |
| Format | VHS standard |
| Tape Width | 12.65mm (1/2 inch) |
| Tape Speed | SP : 33.35mm/s (for NTSC) |
| | EP : 11.12mm/s (for NTSC) |
| FF/REW Time | About 4 Min.(T-120) |
| **GENERAL** | |
| Power Requirements | DC12V |
| Power Consumption | 13W |
| Operating Temperature | 5°C ~ 35°C (Humidity : 80% Maximum, Operating) |
| | -20°C ~ 60°C (Storage) |
| **DIMENSIONS** | |
| Carton size (W*H*D) | 300 * 150 * 300 mm |
| Set size (W*H*D) | 265 * 91 * 275 mm |
| Weight | Approx. 3.0Kg(NET) |

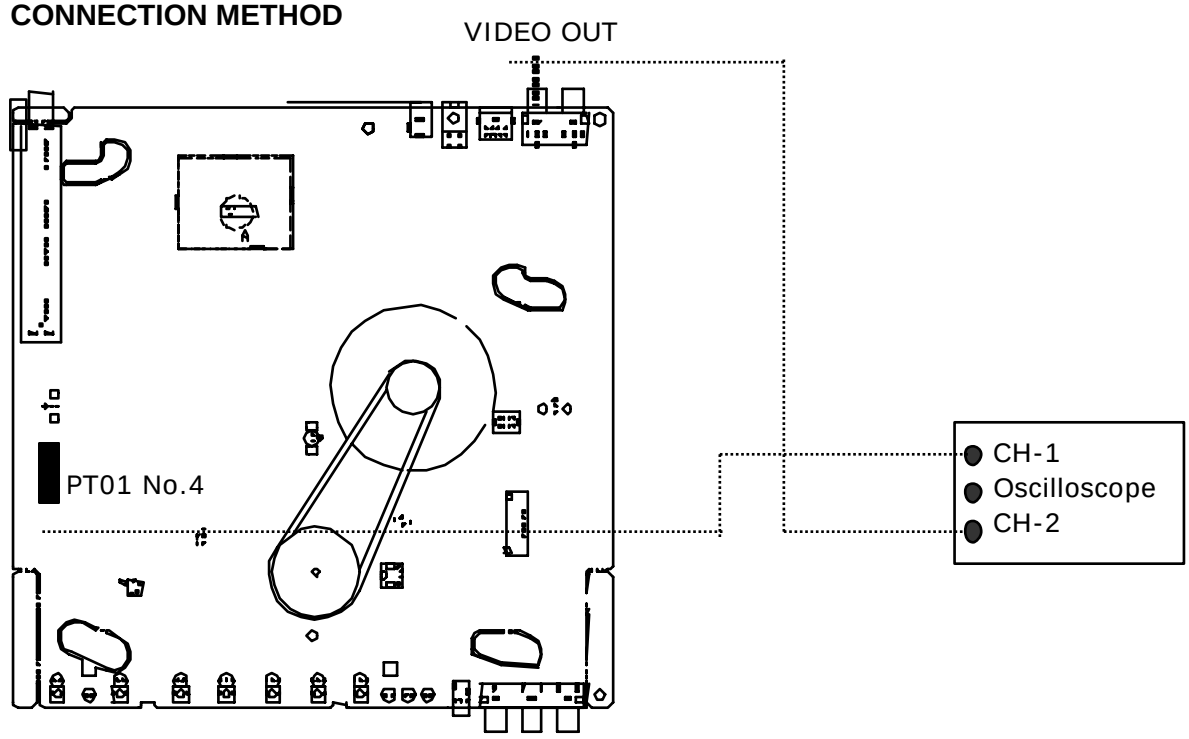
# ELECTRICAL ADJUSTMENT

## 1. SERVO/SYSCON CIRCUIT ADJUSTMENT METHOD

### ◆ VIDEO HEAD SWITCHING POSITION

| Item | Checking Point | Measuring Equipment | Mode | Test Tape |
|---|---|---|---|---|
| REC Knob | CH.1:PT01 Pin4<br>CH.2:A/V Video Out | OSCILLOSCOPE | PB | SN-1 |

### ◆ CONNECTION METHOD



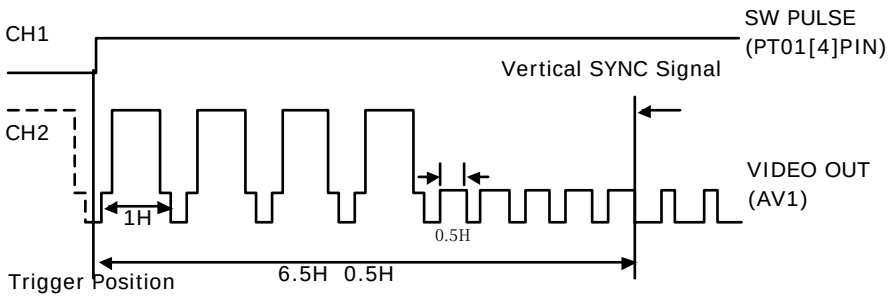

### ◆ ADJUSTMENT PROCEDURE

1) Play back the test tape.

2) Set the oscilloscope in the chop mode connect th CH1 to SW pulse(PT01 (4) PIN), the CH2 to AV1(video out) with CH1 triggering.

3) Press REC Knob to position the V-Sync at 6.5 ± 0.5H from the rising edge of sw pulse.

### ◆ Adjustment Inspection Standard : 6.5 ± 0.5H



# ELECTRICAL PARTS LIST

| LOC | PART-CODE | PART-NAME | PART-DESC | REMARK |
|---|---|---|---|---|
| 1 | 486SA01100 | ACCESSORY AS | - | |
| D001 | 97P0424100 | COVER ACCESSORY | LD-PE T0.1 | |
| D002 | 486A716202 | BATTERY | AAA 1.5V(SUPERGARD) | |
| D003 | 935S001200 | MANUAL OWNERS | - | |
| D004 | 125S000900 | CABLE CONN AS | 3H-3S TRIP 550MM FUSE | |
| D004A | 5FSCB2022S | FUSE GLASS TUBE | SEMKO T2AH 250V MF51 | |
| D005 | 97P881UB50 | CABLE R.S AS | ST PLUG-RMC REV 5.0M | |
| D005A | 1TS0P1238- | IC UNIT R/RECEIVER | TSOP1238--- | |
| D007 | 561S000500 | CONN AS | 2P-2P 50MM DC JACK OPTIONAL | |
| D008 | 221SA02200 | COVER SCREW AS | - | |
| D008A | 221S002200 | COVER SCREW | LD-PE T0.05,지퍼락, 50*60 | |
| D008B | 7173400612 | SCREW TAPPTITE | TT3 BIN 4*6 BK | |
| D008C | 353S001300 | SCREW TAPPING | TYPE-1, TRUSS HEAD 4*16BK | |
| 2 | 281SA01000 | PACKING AS | - | |
| C001 | 11933625-- | PAD F/B | EPS (VPDD) | |
| C002 | 97P4808500 | POLY BAG FOR SET | 800*800*T0.5 | |
| C003 | 285S002100 | BOX CARTON | SW, EX300*SCP150*EX300 | |
| C004 | 285S002300 | BOX OUT CARTON | DW,황색 A-1 EX 175*K180*K180*EX175 | |
| 3 | 311SA00900 | CHASSIS MAIN AS | - | |
| A001 | 313S001100 | CHASSIS MAIN | HI-PS (VO) | |
| A002 | 243S004100 | LABEL SPEC | PE FILM | |
| A003 | 47P4502201 | LABEL SERIAL A | ART PAPER 2EA | |
| A040 | 221S001800 | COVER TOP | SECC T0.5 | |
| A041 | 7173401212 | SCREW TAPTITE | TT2 BIN 4X12 BK | |
| A050 | 221S001900 | COVER BOTTOM | SECC T0.4_각인유 | |
| A051 | 7173401211 | SCREW TAPTITE | TT2 BIN 4X12 MFZN | |
| D100 | 597SA00600 | REMOCON HANDSET | - | |
| D200 | 321SA00600 | BRKT MOUNT AS | - | |
| D200A | 321S000600 | BRKT MOUNT | SECC T1.0 + PANT (BK) | |
| D200B | 221S002100 | COVER MOUNT | LD-PE T0.3(150*200)지퍼락 | |
| M01 | 258SA01500 | PANEL FRONT AS | - | |
| M021 | 7173401211 | SCREW TAPTITE | TT2 BIN 4X12 MFZN | |
| M100A | 97P4219200 | CUSHION PCB | EVA(BLK) (15*7*3T) | |
| M1000 | 97PC1201D- | DECK TOTAL AS | S12-M(NT 2HD HI SP/EP NON DLC) | |
| P502A | 97P88F0514 | CABLE FFC | 1.25K 5P 140MM(DRUM M/T) | |
| P503A | 97P0S02000 | SENSOR DEW | HDP-05-A8 | |
| P503B | 7003300611 | SCREW MACHINE | BIN 3X6 MFZN | |
| Z001 | 511S000007 | PCB MAIN MANUAL A | - | |
| BA01 | 97PB250900 | CASE PREAMP AS | ET T0.4+SUS304 | |
| B001 | 235S001000 | BOARD ANT | HI-PS (VO) | |
| B001A | 256S002700 | PLATE BOARD | PVC T 0.5 | |
| B0011 | 7175301012 | SCREW TAPPTITE | TT2 FLT 3X10 MFZN BLACK | |
| C801 | CEXF1E681F | C ELECTRO | 25V RX 680MF 10X20 | |
| C808 | CEXF1E681F | C ELECTRO | 25V RX 680MF 10X20 | |
| C810 | CEXF1E681F | C ELECTRO | 25V RX 680MF 10X20 | |

| LOC | PART-CODE | PART-NAME | PART-DESC | REMARK |
|---|---|---|---|---|
| C812 | CEXE1V331A | C ELECTRO | 35V RS 330MF (12.5X18) TP | |
| DD501 | DS1R481T-- | LED IR | SIR-481T(P-RANK) | |
| DL508 | DSRM5670A- | LED LAMP | SRM5670-A,2COLOR(RED,GRN) | |
| DL509 | DSRM5670A- | LED LAMP | SRM5670-A,2COLOR(RED,GRN) | |
| DL510 | DSRM5670A- | LED LAMP | SRM5670-A,2COLOR(RED,GRN) | |
| DL511 | DSRM5670A- | LED LAMP | SRM5670-A,2COLOR(RED,GRN) | |
| DL501 | DSM5411H-- | LED | SM-5411H (GREEN) | |
| DL502 | DSR5411H-- | LED | SR-5411H (RED) | |
| DL503 | DSR5411H-- | LED | SR-5411H (RED) | |
| DL504 | DSR5411H-- | LED | SR-5411H (RED) | |
| DL505 | DSR5411H-- | LED | SR-5411H (RED) | |
| DL506 | DSM5411H-- | LED | SM-5411H (GREEN) | |
| DL507 | DSM5411H-- | LED | SM-5411H (GREEN) | |
| DD501A | 97S2302200 | HOLDER LED | ABS | |
| D501A | 324S002100 | HOLDER LED F | ABS | |
| D804 | DSB360---- | DIODE SCHOTTKY | SB360(3A, 60V) 17.5MM F FORMING | |
| H501 | 1TS0P2238W | IC UNIT R/RECEIVER | TS0P2238WE1 | |
| IC502 | 14ATM24C04 | IC EPROM | ATM24C04-10PA-5.0C | |
| IC503 | 1KA3082B-- | IC DRIVER | KA3082B | |
| IC802 | 1KA34063A- | DC/DC CONVERTER | KA34063A | |
| IC803 | 1KA34063A- | DC/DC CONVERTER | KA34063A | |
| AV1 | 97P6315800 | JACK PIN | DPAE-9641 | |
| AV2 | 97P6317400 | JACK PIN | DPAS-9967 | |
| FJ2 | 97P6310800 | JACK DC | YSC-1535 | |
| FJ3 | 974S000002 | JACK PHONE | DHAE-9415(EX-REMOCON, BLACK) | |
| FJ1 | 97P62A0144 | CONN WAFER | 770968-1,4PIN,DUAL | |
| PJ201 | 97P8811614 | CONN AS | 6H-6S 140MM SHIELD | |
| PJ202 | 97P8851210 | CONN AS (Y51210) | 2H-2S 100MM | |
| PT01 | 97P6269000 | CONN WAFER | 00-8283-0612-00000 | |
| P401 | 97P62G06D7 | CONN HOUSING | GF120 FPC 1.25MM 7P | |
| P501 | 97P62T1528 | CONN B/B | TMC-JP-A1 PLUG 2.0MM 8P | |
| P502 | 97P62G06D5 | CONN HOUSING | GF120R FPC 1.25MM 5P | |
| P506 | 97P62T13B2 | CONN B/B | TMC-A,SOCKET,2.0MM,2P | |
| P504 | 97P62T12A5 | CONN B/B | TAS-X,RECEP2.5MM,5P | |
| P503 | 97P6268600 | CONN WAFER | 00-8283-0212-00000 | |
| RF101 | 973S000002 | TUNER RF | TADC-H302F | |
| R541 | RS02F100JS | R METAL OXIDE | 2W 10 OHM J SMALL F FORMING | |
| R805 | RW01B020K- | R WIRE WOUND | 1W 0.2 OHM K BULK 5MM B FORMING | |
| R810 | RW01B020K- | R WIRE WOUND | 1W 0.2 OHM K BULK 5MM B FORMING | |
| S506 | 97P0S01900 | SENSOR REEL | SG-258S | |
| S507 | 97P0S01900 | SENSOR REEL | SG-258S | |
| S502 | TST5811--- | TR PHOTO | ST-5811(D-RANK) | |
| S502A | 97P2342101 | HOLDER P/T | ABS(HF-06601) | |
| S503 | TST5811--- | TR PHOTO | ST-5811(D-RANK) | |
| S503A | 97P2342101 | HOLDER P/T | ABS(HF-06601) | |

| LOC | PART-CODE | PART-NAME | PART-DESC | REMARK |
|---|---|---|---|---|
| S505 | 5SN0101Z20 | SW DETECT | JDS1105-6X | |
| S504 | 972S000001 | SENSOR THERMAL | 10K OHM(LNTK103HW) | |
| L802 | 56C351K--- | COIL CHOKE | 350UH K EI1614 | |
| L803 | 56C351K--- | COIL CHOKE | 350UH K EI1614 | |
| X602 | 5XJ14R31AE | CRYSTAL QUARTZ | HC-49/S 14.31818MHZ 30PPM CL=16PF | |
| 0I801 | 960S000001 | RADIATOR SUB AS | NTD3000PD(0100+78R12) | |
| IC801 | 1KA78R12-- | IC REGULATOR | KA78R12 | |
| I801A | NE1MP00100 | RADIATOR TR | AL UL/CSA(NCL3300) | |
| I801B | 7174300811 | SCREW TAPPTITE | TT2 RND 3X8 MFZN | |
| I801C | 2291130215 | GREASE SILICON | G-600 | |
| 0Q803 | 960S000002 | RADIATOR SUB AS | NTD3000PD(0100+A1010) | |
| Q803 | 1KSA1010Y- | TR | KSA1010Y | |
| Q803A | NE1MP00100 | RADIATOR TR | AL UL/CSA(NCL3300) | |
| Q803B | 7174300811 | SCREW TAPPTITE | TT2 RND 3X8 MFZN | |
| Q803C | 2291130215 | GREASE SILICON | G-600 | |
| 11 | 512S000011 | PCB MAIN CHIP AS | CHIP | |
| F1SS01A | 5F1JA1124- | FUSE PTC | UL/CSA/TUV 1.10A SMD1812P110TS/16 | |
| C109 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C110 | HCLK560JCA | C CHIP CERA | 50V SL 56PF J 2012 | |
| C111 | HCLK560JCA | C CHIP CERA | 50V SL 56PF J 2012 | |
| C113 | HCBK123KCA | C CHIP CERA | 50V X7R 0.012MF K 2012 | |
| C114 | HCBK123KCA | C CHIP CERA | 50V X7R 0.012MF K 2012 | |
| C116 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C204 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C206 | HCBK472KCA | C CHIP CERA | 50V X7R 4700PF K 2012 | |
| C207 | HCBK332KCA | C CHIP CERA | 50V X7R 3300PF K 2012 | |
| C209 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C210 | HCBK332KCA | C CHIP CERA | 50V X7R 3300PF K 2012 | |
| C211 | HCLK561JCA | C CHIP CERA | 50V SL 560PF J 2012 | |
| C213 | HCBK102KCA | C CHIP CERA | 50V X7R 1000PF K 2012 | |
| C215 | HCBK332KCA | C CHIP CERA | 50V X7R 3300PF K 2012 | |
| C216 | HCBK472KCA | C CHIP CERA | 50V X7R 4700PF K 2012 | |
| C217 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C220 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C224 | HCBK102KCA | C CHIP CERA | 50V X7R 1000PF K 2012 | |
| C226 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C228 | HCLK392KCA | C CHIP CERA | 50V SL 3900PF K 2012 | |
| C232 | HCLK392KCA | C CHIP CERA | 50V SL 3900PF K 2012 | |
| C233 | HCBK182KCA | C CHIP CERA | 50V X7R 1800PF K 2012 | |
| C234 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C241 | HCQK821JCA | C CHIP CERA | 50V CH 820PF J 2012 | |
| C242 | HCBK332KCA | C CHIP CERA | 50V X7R 3300PF K 2012 | |
| C245 | HCBK152KCA | C CHIP CERA | 50V X7R 1500PF K 2012 | |
| C247 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C248 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C252 | HCLK391JCA | C CHIP CERA | 50V SL 390PF J 2012 | |

| LOC | PART-CODE | PART-NAME | PART-DESC | REMARK |
|---|---|---|---|---|
| C403 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C409 | HCBK473KCA | C CHIP CERA | 50V X7R 0.047MF K 2012 | |
| C410 | HCQK510JCA | C CHIP CERA | 50V CH 51PF J 2012 | |
| C412 | HCBK223KCA | C CHIP CERA | 50V X7R 0.022MF K 2012 | |
| C413 | HCBK223KCA | C CHIP CERA | 50V X7R 0.022MF K 2012 | |
| C415 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C418 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C420 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C421 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C422 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C425 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C426 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C430 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C432 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C438 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C448 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C453 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C456 | HCQK201JCA | C CHIP CERA | 50V CH 200PF J 2012 | |
| C457 | HCQK390JCA | C CHIP CERA | 50V CH 39PF J 2012 | |
| C459 | HCQK391JCA | C CHIP CERA | 50V CH 390PF J 2012 | |
| C460 | HCQK509CCA | C CHIP CERA | 50V CH 5PF C 2012 | |
| C462 | HCQK270JCA | C CHIP CERA | 50V CH 27PF J 2012 | |
| C463 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C467 | HCBK473KCA | C CHIP CERA | 50V X7R 0.047MF K 2012 | |
| C472 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C473 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C477 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C501 | HCBK223KCA | C CHIP CERA | 50V X7R 0.022MF K 2012 | |
| C502 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C503 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C504 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C505 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C506 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C507 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C508 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C509 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C510 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C511 | HCQK200JCA | C CHIP CERA | 50V CH 20PF J 2012 | |
| C512 | HCQK180JCA | C CHIP CERA | 50V CH 18PF J 2012 | |
| C513 | HCQK180JCA | C CHIP CERA | 50V CH 18PF J 2012 | |
| C514 | HCQK180JCA | C CHIP CERA | 50V CH 18PF J 2012 | |
| C515 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C516 | HCQK471JCA | C CHIP CERA | 50V CH 470PF J 2012 | |
| C517 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C519 | HCBK562KCA | C CHIP CERA | 50V X7R 5600PF K 2012 | |
| C521 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |

# ELECTRICAL PARTS LIST

| LOC | PART-CODE | PART-NAME | PART-DESC | REMARK |
|---|---|---|---|---|
| C522 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C523 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C524 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C526 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C527 | HCBK102KCA | C CHIP CERA | 50V X7R 1000PF K 2012 | |
| C528 | HCBK102KCA | C CHIP CERA | 50V X7R 1000PF K 2012 | |
| C529 | HCBK223KCA | C CHIP CERA | 50V X7R 0.022MF K 2012 | |
| C530 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C531 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C532 | HCBK102KCA | C CHIP CERA | 50V X7R 1000PF K 2012 | |
| C533 | HCBK222KCA | C CHIP CERA | 50V X7R 2200PF K 2012 | |
| C535 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C538 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C540 | HCBK121JCA | C CHIP CERA | 50V X7R 120PF J 2012 | |
| C544 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C803 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C804 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C805 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C807 | HCBK103KCA | C CHIP CERA | 50V X7R 0.01MF K 2012 | |
| C809 | HCQK101JCA | C CHIP CERA | 50V CH 100PF J 2012 | |
| C813 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C817 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C818 | HCQK201JCA | C CHIP CERA | 50V CH 200PF J 2012 | |
| C820 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C821 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| C900 | HCBK104KCA | C CHIP CERA | 50V X7R 0.1MF K 2012 | |
| CQ803 | HCQK471JCA | C CHIP CERA | 50V CH 470PF J 2012 | |
| IC201 | 1LA72637M- | IC HI-FI | LA72637M | |
| IC401 | 1LA71578-- | IC AV | LA71578 | |
| IC501 | 1M37760133 | IC MICOM | M37760M8H-133GP | |
| JW001 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW002 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW003 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW004 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW005 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW008 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW009 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW010 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW011 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW012 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW013 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW016 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW017 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW018 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW019 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW020 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |

| LOC | PART-CODE | PART-NAME | PART-DESC | REMARK |
|---|---|---|---|---|
| JW022 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW023 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW024 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW025 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW026 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW027 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW028 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW029 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW030 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW031 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW032 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW033 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW034 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW035 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW036 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW037 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW038 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| JW039 | HRF8000-EA | R CHIP | 1/8 0 OHM 3216 | |
| Q809(E-C | HRFT000-CA | R CHIP | 1/10 0 OHM 2012 | |
| OPT(O) | HRFT102JCA | R CHIP | 1/10 1K OHM J 2012 | |
| Q501 | TKSR1104-B | TR CHIP | KSR1104 | |
| Q502 | TKSR1104-B | TR CHIP | KSR1104 | |
| Q503 | TKSR1104-B | TR CHIP | KSR1104 | |
| Q504 | TKSR1104-B | TR CHIP | KSR1104 | |
| Q505 | TKSR1104-B | TR CHIP | KSR1104 | |
| Q506 | TKSR1104-B | TR CHIP | KSR1104 | |
| Q507 | TKSR1104-B | TR CHIP | KSR1104 | |
| Q508 | TKSR1104-B | TR CHIP | KSR1104 | |
| Q509 | T2SC2412KB | TR CHIP | 2SC2412K-T146-BR | |
| Q510 | TKSR1104-B | TR CHIP | KSR1104 | |
| Q512 | TKSR1104-B | TR CHIP | KSR1104 | |
| R101 | HRFT470JCA | R CHIP | 1/10 47 OHM J 2012 | |
| R103 | HRFT750JCA | R CHIP | 1/10 75 OHM J 2012 | |
| R106 | HRFT750JCA | R CHIP | 1/10 75 OHM J 2012 | |
| R109 | HRFT303JCA | R CHIP | 1/10 30K OHM J 2012 | |
| R111 | HRFT122JCA | R CHIP | 1/10 1.2K OHM J 2012 | |
| R112 | HRFT222JCA | R CHIP | 1/10 2.2K OHM J 2012 | |
| R113 | HRFT122JCA | R CHIP | 1/10 1.2K OHM J 2012 | |
| R120 | HRFT103JCA | R CHIP | 1/10 10K OHM J 2012 | |
| R121 | HRFT750JCA | R CHIP | 1/10 75 OHM J 2012 | |
| R125 | HRFT102JCA | R CHIP | 1/10 1K OHM J 2012 | |
| R202 | HRFT563JCA | R CHIP | 1/10 56K OHM J 2012 | |
| R205 | HRFT564JCA | R CHIP | 1/10 560K OHM J 2012 | |
| R206 | HRFT202JCA | R CHIP | 1/10 2K OHM J 2012 | |
| R207 | HRFT331JCA | R CHIP | 1/10 330 OHM J 2012 | |
| R208 | HRFT563JCA | R CHIP | 1/10 56K OHM J 2012 | |

# ELECTRICAL PARTS LIST

| LOC | PART-CODE | PART-NAME | PART-DESC | REMARK |
|---|---|---|---|---|
| R210 | HRFT183JCA | R CHIP | 1/10 18K OHM J 2012 | |
| R215 | HRFT203JCA | R CHIP | 1/10 20K OHM J 2012 | |
| R216 | HRFT103JCA | R CHIP | 1/10 10K OHM J 2012 | |
| R217 | HRFT623JCA | R CHIP | 1/10 62K OHM J 2012 | |
| R218 | HRFT183JCA | R CHIP | 1/10 18K OHM J 2012 | |
| R223 | HRFT183JCA | R CHIP | 1/10 18K OHM J 2012 | |
| R241 | HRFT911GCA | R CHIP | 1/10 910 OHM G | |
| R242 | HRFT273JCA | R CHIP | 1/10 27K OHM J 2012 | |
| R243 | HRFT201JCA | R CHIP | 1/10 200 OHM J 2012 | |
| R244 | HRFT334JCA | R CHIP | 1/10 330K OHM J 2012 | |
| R245 | HRFT123JCA | R CHIP | 1/10 12K OHM J 2012 | |
| R246 | HRFT822JCA | R CHIP | 1/10 8.2K OHM J 2012 | |
| R247 | HRFT822JCA | R CHIP | 1/10 8.2K OHM J 2012 | |
| R249 | HRFT272JCA | R CHIP | 1/10 2.7K OHM J 2012 | |
| R251 | HRFT472JCA | R CHIP | 1/10 4.7K OHM J 2012 | |
| R253 | HRFT562JCA | R CHIP | 1/10 5.6K OHM J 2012 | |
| R254 | HRFT123JCA | R CHIP | 1/10 12K OHM J 2012 | |
| R256 | HRFT000-CA | R CHIP | 1/10 0 OHM 2012 | |
| R257 | HRFT223JCA | R CHIP | 1/10 22K OHM J 2012 | |
| R258 | HRFT622JCA | R CHIP | 1/10 6.2K OHM J 2012 | |
| R259 | HRFT181GCA | R CHIP | 1/10 180 OHM G 2012 | |
| R260 | HRFT222JCA | R CHIP | 1/10 2.2K OHM J 2012 | |
| R261 | HRFT103JCA | R CHIP | 1/10 10K OHM J 2012 | |
| R262 | HRFT223JCA | R CHIP | 1/10 22K OHM J 2012 | |
| R263 | HRFT512JCA | R CHIP | 1/10 5.1K OHM J 2012 | |
| R264 | HRFT103JCA | R CHIP | 1/10 10K OHM J 2012 | |
| R265 | HRFT561JCA | R CHIP | 1/10 560 OHM J 2012 | |
| R266 | HRFT101JCA | R CHIP | 1/10 100 OHM J 2012 | |
| R267 | HRFT103JCA | R CHIP | 1/10 10K OHM J 2012 | |
| R401 | HRFT472JCA | R CHIP | 1/10 4.7K OHM J 2012 | |
| R402 | HRFT273JCA | R CHIP | 1/10 27K OHM J 2012 | |
| R403 | HRFT473JCA | R CHIP | 1/10 47K OHM J 2012 | |
| R406 | HRFT822JCA | R CHIP | 1/10 8.2K OHM J 2012 | |
| R408 | HRFT182JCA | R CHIP | 1/10 1.8K OHM J 2012 | |
| R410 | HRFT102JCA | R CHIP | 1/10 1K OHM J 2012 | |
| R413 | HRFT563JCA | R CHIP | 1/10 56K OHM J 2012 | |
| R416 | HRFT513JCA | R CHIP | 1/10 51K OHM J 2012 | |
| R420 | HRFT472JCA | R CHIP | 1/10 4.7K OHM J 2012 | |
| R421 | HRFT561JCA | R CHIP | 1/10 560 OHM J 2012 | |
| R423 | HRFT272JCA | R CHIP | 1/10 2.7K OHM J 2012 | |
| R424 | HRFT201JCA | R CHIP | 1/10 200 OHM J 2012 | |
| R425 | HRFT331JCA | R CHIP | 1/10 330 OHM J 2012 | |
| R426 | HRFT122JCA | R CHIP | 1/10 1.2K OHM J 2012 | |
| R427 | HRFT331JCA | R CHIP | 1/10 330 OHM J 2012 | |
| R432 | HRFT123JCA | R CHIP | 1/10 12K OHM J 2012 | |
| R438 | HRFT511JCA | R CHIP | 1/10 510 OHM J 2012 | |

| LOC | PART-CODE | PART-NAME | PART-DESC | REMARK |
|---|---|---|---|---|
| R440 | HRFT152JCA | R CHIP | 1/10 1.5K OHM J 2012 | |
| R451 | HRFT393JCA | R CHIP | 1/10 39K OHM J 2012 | |
| R501 | HRFT123JCA | R CHIP | 1/10 12K OHM J 2012 | |
| R502 | HRFT332JCA | R CHIP | 1/10 3.3K OHM J 2012 | |
| R503 | HRFT153JCA | R CHIP | 1/10 15K OHM J 2012 | |
| R504 | HRFT473JCA | R CHIP | 1/10 47K OHM J 2012 | |
| R507 | HRFT474JCA | R CHIP | 1/10 470K OHM J 2012 | |
| R508 | HRFT334JCA | R CHIP | 1/10 330K OHM J 2012 | |
| R509 | HRFT123JCA | R CHIP | 1/10 12K OHM J 2012 | |
| R510 | HRFT274JCA | R CHIP | 1/10 270K OHM J 2012 | |
| R512 | HRFT473JCA | R CHIP | 1/10 47K OHM J 2012 | |
| R513 | HRFT682JCA | R CHIP | 1/10 6.8K OHM J 2012 | |
| R515 | HRFT474JCA | R CHIP | 1/10 470K OHM J 2012 | |
| R516 | HRFT153JCA | R CHIP | 1/10 15K OHM J 2012 | |
| R517 | HRFT103JCA | R CHIP | 1/10 10K OHM J 2012 | |
| R519 | HRFT103JCA | R CHIP | 1/10 10K OHM J 2012 | |
| R522 | HRFT132JCA | R CHIP | 1/10 1.3K OHM J 2012 | |
| R523 | HRFT102JCA | R CHIP | 1/10 1K OHM J 2012 | |
| R524 | HRFT822JCA | R CHIP | 1/10 8.2K OHM J 2012 | |
| R525 | HRFT153JCA | R CHIP | 1/10 15K OHM J 2012 | |
| R532 | HRFT222JCA | R CHIP | 1/10 2.2K OHM J 2012 | |
| R534 | HRFT472JCA | R CHIP | 1/10 4.7K OHM J 2012 | |
| R535 | HRFT472JCA | R CHIP | 1/10 4.7K OHM J 2012 | |
| R536 | HRFT103JCA | R CHIP | 1/10 10K OHM J 2012 | |
| R537 | HRFT473JCA | R CHIP | 1/10 47K OHM J 2012 | |
| R538 | HRFT473JCA | R CHIP | 1/10 47K OHM J 2012 | |
| R546 | HRFT473JCA | R CHIP | 1/10 47K OHM J 2012 | |
| R547 | HRFT201JCA | R CHIP | 1/10 200 OHM J 2012 | |
| R548 | HRFT273JCA | R CHIP | 1/10 27K OHM J 2012 | |
| R549 | HRFT101JCA | R CHIP | 1/10 100 OHM J 2012 | |
| R550 | HRFT201JCA | R CHIP | 1/10 200 OHM J 2012 | |
| R551 | HRFT273JCA | R CHIP | 1/10 27K OHM J 2012 | |
| R553 | HRFT103JCA | R CHIP | 1/10 10K OHM J 2012 | |
| R554 | HRFT103JCA | R CHIP | 1/10 10K OHM J 2012 | |
| R559 | HRFT332JCA | R CHIP | 1/10 3.3K OHM J 2012 | |
| R560 | HRFT121JCA | R CHIP | 1/10 120 OHM J 2012 | |
| R561 | HRFT121JCA | R CHIP | 1/10 120 OHM J 2012 | |
| R568 | HRFT331JCA | R CHIP | 1/10 330 OHM J 2012 | |
| R573 | HRFT331JCA | R CHIP | 1/10 330 OHM J 2012 | |
| R581 | HRFT331JCA | R CHIP | 1/10 330 OHM J 2012 | |
| R583 | HRFT472JCA | R CHIP | 1/10 4.7K OHM J 2012 | |
| R585 | HRFT473JCA | R CHIP | 1/10 47K OHM J 2012 | |
| R587 | HRFT473JCA | R CHIP | 1/10 47K OHM J 2012 | |
| R589 | HRFT473JCA | R CHIP | 1/10 47K OHM J 2012 | |
| R590 | HRFT102JCA | R CHIP | 1/10 1K OHM J 2012 | |
| R591 | HRFT102JCA | R CHIP | 1/10 1K OHM J 2012 | |

# ELECTRICAL PARTS LIST

| LOC | PART-CODE | PART-NAME | PART-DESC | REMARK |
|---|---|---|---|---|
| R592 | HRFT473JCA | R CHIP | 1/10 47K OHM J 2012 | |
| R801 | HRFT123JCA | R CHIP | 1/10 12K OHM J 2012 | |
| R806 | HRFT122JCA | R CHIP | 1/10 1.2K OHM J 2012 | |
| R808 | HRFT822JCA | R CHIP | 1/10 8.2K OHM J 2012 | |
| R809 | HRFT222JCA | R CHIP | 1/10 2.2K OHM J 2012 | |
| R812 | HRFT163JCA | R CHIP | 1/10 16K OHM J 2012 | |
| R813 | HRFT151JCA | R CHIP | 1/10 150 OHM J 2012 | |
| 12 | 512S000012 | PCB MAIN RADIAL AS- | | |
| C107 | CEXF1H100A | C ELECTRO | 50V RSM 10MF (5X7) TP | |
| C108 | CEXE0J221S | C ELECTRO | 6.3V RSA 220MF 6.3X7 | |
| C118 | CEXF1C471V | C ELECTRO | 16V RSS 470MF 8X11.5 TP | |
| C119 | CEXF1C471V | C ELECTRO | 16V RSS 470MF 8X11.5 TP | |
| C121 | CEXF1C470A | C ELECTRO | 16V RSM 47MF (5X7) TP | |
| C122 | CEXF1C470A | C ELECTRO | 16V RSM 47MF (5X7) TP | |
| C201 | CEXF1H109A | C ELECTRO | 50V RSM 1MF (4X7) TP | |
| C202 | CEXF1C100A | C ELECTRO | 16V RSM 10MF 4X7 | |
| C203 | CEXF1H479A | C ELECTRO | 50V RSM 4.7MF (4X7) TP | |
| C205 | CEXF1C220A | C ELECTRO | 16V RSM 22MF (5X7) | |
| C208 | CEXF1H108A | C ELECTRO | 50V RSM 0.1MF 4X7 | |
| C212 | CEXF1H479A | C ELECTRO | 50V RSM 4.7MF (4X7) TP | |
| C214 | CEXE0J221S | C ELECTRO | 6.3V RSA 220MF 6.3X7 | |
| C218 | CEXF1E220A | C ELECTRO | 25V RSM 22MF 6.3X7 TP | |
| C219 | CEXF1E220A | C ELECTRO | 25V RSM 22MF 6.3X7 TP | |
| C221 | CEXF1H479A | C ELECTRO | 50V RSM 4.7MF (4X7) TP | |
| C222 | CEXF1C100A | C ELECTRO | 16V RSM 10MF 4X7 | |
| C223 | CEXF1H109A | C ELECTRO | 50V RSM 1MF (4X7) TP | |
| C225 | CEXF1H100A | C ELECTRO | 50V RSM 10MF (5X7) TP | |
| C227 | CEXF1C101A | C ELECTRO | 16V RSM 100MF (6.3X7) TP | |
| C229 | CEXF1C100A | C ELECTRO | 16V RSM 10MF 4X7 | |
| C231 | CEXF1C100A | C ELECTRO | 16V RSM 10MF 4X7 | |
| C243 | CEXF1H100A | C ELECTRO | 50V RSM 10MF (5X7) TP | |
| C244 | CMXM2A103J | C MYLAR | 100V 0.01MF J (TP) | |
| C246 | CEXF1H479A | C ELECTRO | 50V RSM 4.7MF (4X7) TP | |
| C249 | CMXV2A153J | C MYLAR | 100V 0.015MF J (TP) SMALL | |
| C250 | CEXF1H479A | C ELECTRO | 50V RSM 4.7MF (4X7) TP | |
| C251 | CEXF1C470A | C ELECTRO | 16V RSM 47MF (5X7) TP | |
| C253 | CMXV2A153J | C MYLAR | 100V 0.015MF J (TP) SMALL | |
| C255 | CEXF1C220A | C ELECTRO | 16V RSM 22MF (5X7) | |
| C290 | CEXF1C100A | C ELECTRO | 16V RSM 10MF 4X7 | |
| C401 | CEXF1H109A | C ELECTRO | 50V RSM 1MF (4X7) TP | |
| C402 | CEXF1H109A | C ELECTRO | 50V RSM 1MF (4X7) TP | |
| C404 | CEXF1C101A | C ELECTRO | 16V RSM 100MF (6.3X7) TP | |
| C411 | CEXF1H109A | C ELECTRO | 50V RSM 1MF (4X7) TP | |
| C414 | CEXF1H109A | C ELECTRO | 50V RSM 1MF (4X7) TP | |
| C416 | CEXF1H109A | C ELECTRO | 50V RSM 1MF (4X7) TP | |
| C417 | CEXF1C470A | C ELECTRO | 16V RSM 47MF (5X7) TP | |

| LOC | PART-CODE | PART-NAME | PART-DESC | REMARK |
|---|---|---|---|---|
| C419 | CEXF1C101A | C ELECTRO | 16V RSM 100MF (6.3X7) TP | |
| C427 | CEXF1H109A | C ELECTRO | 50V RSM 1MF (4X7) TP | |
| C428 | CEXF1H100A | C ELECTRO | 50V RSM 10MF (5X7) TP | |
| C429 | CEXF1H109A | C ELECTRO | 50V RSM 1MF (4X7) TP | |
| C431 | CEXF1C470A | C ELECTRO | 16V RSM 47MF (5X7) TP | |
| C433 | CEXF1C470A | C ELECTRO | 16V RSM 47MF (5X7) TP | |
| C437 | CEXF1H109A | C ELECTRO | 50V RSM 1MF (4X7) TP | |
| C451 | CEXF1H100A | C ELECTRO | 50V RSM 10MF (5X7) TP | |
| C452 | CEXF1H100A | C ELECTRO | 50V RSM 10MF (5X7) TP | |
| C458 | CEXF1H339A | C ELECTRO | 50V RSM 3.3MF 4X7 | |
| C464 | CEXE0J221S | C ELECTRO | 6.3V RSA 220MF 6.3X7 | |
| C466 | CEXF1H109A | C ELECTRO | 50V RSM 1MF (4X7) TP | |
| C475 | CEXF1C470A | C ELECTRO | 16V RSM 47MF (5X7) TP | |
| C476 | CEXF1C220A | C ELECTRO | 16V RSM 22MF (5X7) | |
| C478 | CEXF1C220A | C ELECTRO | 16V RSM 22MF (5X7) | |
| C518 | CEXF1H109A | C ELECTRO | 50V RSM 1MF (4X7) TP | |
| C534 | CEXF1C470A | C ELECTRO | 16V RSM 47MF (5X7) TP | |
| C537 | CEXF1C101A | C ELECTRO | 16V RSM 100MF (6.3X7) TP | |
| C541 | CEXF1C470A | C ELECTRO | 16V RSM 47MF (5X7) TP | |
| C550 | CEXF1C100A | C ELECTRO | 16V RSM 10MF 4X7 | |
| C551 | CEXF1C100A | C ELECTRO | 16V RSM 10MF 4X7 | |
| C552 | CEXF1C470A | C ELECTRO | 16V RSM 47MF (5X7) TP | |
| C553 | CEXF1C101A | C ELECTRO | 16V RSM 100MF (6.3X7) TP | |
| C554 | CEXF1C100A | C ELECTRO | 16V RSM 10MF 4X7 | |
| C802 | CEXF1C221V | C ELECTRO | 16V RSS 220MF (8X11.5) TP | |
| C811 | CEXF1H479A | C ELECTRO | 50V RSM 4.7MF (4X7) TP | |
| C814 | CEXF1C101A | C ELECTRO | 16V RSM 100MF (6.3X7) TP | |
| C815 | CEXF1C101A | C ELECTRO | 16V RSM 100MF (6.3X7) TP | |
| C816 | CEXF1C101A | C ELECTRO | 16V RSM 100MF (6.3X7) TP | |
| C819 | CEXF1C101A | C ELECTRO | 16V RSM 100MF (6.3X7) TP | |
| IC504 | 1K1A7031P- | IC SWITCH RESET | KIA7031P | |
| IC804 | 1K1A78L05- | IC REGULATOR | KIA78L05 (RADIAL) | |
| L107 | 5CPX101J2T | COIL PEAKING | 100UH(BRN-BRN) | |
| L201 | 5CPX100J2T | COIL PEAKING | 10UH(BRN-BLK) | |
| L241 | 5CPX680J2T | COIL PEAKING | 68UH(BLU-BLK) | |
| L401 | 5CPX100J2T | COIL PEAKING | 10UH(BRN-BLK) | |
| L402 | 5CPX100J2T | COIL PEAKING | 10UH(BRN-BLK) | |
| L404 | 5CPX100J2T | COIL PEAKING | 10UH(BRN-BLK) | |
| L405 | 5CPX100J2T | COIL PEAKING | 10UH(BRN-BLK) | |
| L406 | 5CPX100J2T | COIL PEAKING | 10UH(BRN-BLK) | |
| L501 | 5CPX229J-- | COIL PEAKING | 2.2UH J (RADIAL) | |
| L503 | 5CPX471J-- | COIL PEAKING | 470UH J (RADIAL) | |
| L801 | 56C220K686 | COIL CHOKE | 22UH K | |
| L806 | 56C220K686 | COIL CHOKE | 22UH K | |
| Q101 | TZTA1266Y- | TR | KTA1266Y- (AUTO)(1015Y) | |
| Q102 | TZTA1266Y- | TR | KTA1266Y- (AUTO)(1015Y) | |

# ELECTRICAL PARTS LIST

| LOC | PART-CODE | PART-NAME | PART-DESC | REMARK |
|---|---|---|---|---|
| Q241 | TZTA1266Y- | TR | KTA1266Y- (AUTO)(1015Y) | |
| Q242 | TZTC3198Y- | TR | KTC3198Y-(1815Y) (AUTO) | |
| Q243 | TZTC3202Y- | TR | KTC3202Y (AUTO)(1959Y) | |
| Q244 | TZTA1266Y- | TR | KTA1266Y- (AUTO)(1015Y) | |
| Q245 | TZTC3198Y- | TR | KTC3198Y-(1815Y) (AUTO) | |
| Q246 | TZTC3198Y- | TR | KTC3198Y-(1815Y) (AUTO) | |
| Q402 | TZTC3198Y- | TR | KTC3198Y-(1815Y) (AUTO) | |
| Q403 | TZTC3198Y- | TR | KTC3198Y-(1815Y) (AUTO) | |
| Q407 | TZTA1266Y- | TR | KTA1266Y- (AUTO)(1015Y) | |
| Q801 | TZSR1001-- | TR | KSR1001 (AUTO) | |
| Q802 | TZTA1273Y- | TR | KTA1273Y(928A) | |
| Q804 | TZTC3205Y- | TR | KTC3205Y (2236Y) | |
| Q805 | TZTC3205Y- | TR | KTC3205Y (2236Y) | |
| Q806 | TZTC3205Y- | TR | KTC3205Y (2236Y) | |
| Q807 | TZTC3202Y- | TR | KTC3202Y (AUTO)(1959Y) | |
| SW501 | 5S50101Z97 | SW TACT | SKHV10914B 9.5M AUTO | |
| SW502 | 5S50101Z97 | SW TACT | SKHV10914B 9.5M AUTO | |
| SW503 | 5S50101Z97 | SW TACT | SKHV10914B 9.5M AUTO | |
| SW504 | 5S50101Z97 | SW TACT | SKHV10914B 9.5M AUTO | |
| SW505 | 5S50101Z97 | SW TACT | SKHV10914B 9.5M AUTO | |
| SW506 | 5S50101Z97 | SW TACT | SKHV10914B 9.5M AUTO | |
| SW507 | 5S50101Z97 | SW TACT | SKHV10914B 9.5M AUTO | |
| X401 | 5XE3R579TB | CRYSTAL QUARTZ | HC-49/U 3.579545MHZ 15PPM SER TP | |
| 13 | 512S000013 | PCB MAIN AXIAL AS | - | |
| U001 | 503S000037 | PCB MAIN | 247*246*1.6T VER. "B" | |
| BD801 | 5PB13857-- | COIL BEAD | B13857(AXIAL) | |
| C115 | CCZF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) | |
| C424 | CCZB1H103K | C CERA | HIKB 50V 0.01MF K AXIAL | |
| C449 | CCZF1H104Z | C CERA | 50V HIKF 0.1MF Z | |
| C465 | CCZF1H104Z | C CERA | 50V HIKF 0.1MF Z | |
| C474 | CCZB1H103K | C CERA | HIKB 50V 0.01MF K AXIAL | |
| C536 | CCZB1H103K | C CERA | HIKB 50V 0.01MF K AXIAL | |
| D101 | DZN4148--- | DIODE | 1N4148 | |
| D401 | DZN4148--- | DIODE | 1N4148 | |
| D402 | DZN4148--- | DIODE | 1N4148 | |
| D501 | DZN4148--- | DIODE | 1N4148 | |
| D502 | DZN4148--- | DIODE | 1N4148 | |
| D503 | DZN4148--- | DIODE | 1N4148 | |
| D504 | DZN4148--- | DIODE | 1N4148 | |
| D508 | DZN4148--- | DIODE | 1N4148 | |
| D510 | DZUZ9R1BSC | DIODE ZENER | UZ-9.1BSC(8.89-9.29V) | |
| D512 | DZN4002--- | DIODE | 1N4002 | |
| D806 | DZN4148--- | DIODE | 1N4148 | |
| D807 | DZN4002--- | DIODE | 1N4002 | |
| D808 | DZN4148--- | DIODE | 1N4148 | |
| D809 | DZN5819--- | DIODE | 1N5819 40V,1A AUTO | |

| LOC | PART-CODE | PART-NAME | PART-DESC | REMARK |
|---|---|---|---|---|
| D810 | DZN5819--- | DIODE | 1N5819 40V,1A AUTO | |
| D811 | DZUZ9R1BSC | DIODE ZENER | UZ-9.1BSC(8.89-9.29V) | |
| D812 | DZN4148--- | DIODE | 1N4148 | |
| D813 | DZMTZJ5R1B | DIODE ZENER | MTZ J 5.1B(4.94-5.20) | |
| D814 | DZN4148--- | DIODE | 1N4148 | |
| L202 | 5CPZ680K02 | COIL PEAKING | 68UH K (AXIAL 3.5MM) | |
| L407 | 5CPZ560J02 | COIL PEAKING | 56UH J (AXIAL 3.5MM) | |
| R110 | RD-AZ243J- | R CARBON FILM | 1/6 24K OHM J | |
| R114 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J | |
| R115 | RD-AZ473J- | R CARBON FILM | 1/6 47K OHM J | |
| R119 | RD-4Z471J- | R CARBON FILM | 1/4 470 OHM J | |
| R201 | RD-AZ154J- | R CARBON FILM | 1/6 150K OHM J | |
| R203 | RD-AZ152J- | R CARBON FILM | 1/6 1.5K OHM J | |
| R204 | RD-AZ152J- | R CARBON FILM | 1/6 1.5K OHM J | |
| R209 | RD-AZ154J- | R CARBON FILM | 1/6 150K OHM J | |
| R211 | RD-AZ623J- | R CARBON FILM | 1/6 62K OHM J | |
| R212 | RD-AZ621J- | R CARBON FILM | 1/6 620 OHM J | |
| R213 | RD-AZ242J- | R CARBON FILM | 1/6 2.4K OHM J | |
| R214 | RD-AZ242J- | R CARBON FILM | 1/6 2.4K OHM J | |
| R219 | RD-AZ621J- | R CARBON FILM | 1/6 620 OHM J | |
| R220 | RD-AZ183J- | R CARBON FILM | 1/6 18K OHM J | |
| R221 | RD-AZ823J- | R CARBON FILM | 1/6 82K OHM J | |
| R222 | RD-AZ823J- | R CARBON FILM | 1/6 82K OHM J | |
| R224 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J | |
| R250 | RD-AZ123J- | R CARBON FILM | 1/6 12K OHM J | |
| R268 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J | |
| R404 | RD-AZ225J- | R CARBON FILM | 1/6 2.2M OHM J | |
| R407 | RD-AZ182J- | R CARBON FILM | 1/6 1.8K OHM J | |
| R411 | RD-AZ392J- | R CARBON FILM | 1/6 3.9K OHM J | |
| R414 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J | |
| R417 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J | |
| R418 | RD-AZ152J- | R CARBON FILM | 1/6 1.5K OHM J | |
| R419 | RD-AZ152J- | R CARBON FILM | 1/6 1.5K OHM J | |
| R422 | RD-AZ561J- | R CARBON FILM | 1/6 560 OHM J | |
| R429 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J | |
| R430 | RD-AZ203J- | R CARBON FILM | 1/6 20K OHM J | |
| R431 | RD-AZ203J- | R CARBON FILM | 1/6 20K OHM J | |
| R433 | RD-AZ182J- | R CARBON FILM | 1/6 1.8K OHM J | |
| R436 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J | |
| R437 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J | |
| R450 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J | |
| R506 | RD-4Z151J- | R CARBON FILM | 1/4 150 OHM J | |
| R511 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J | |
| R518 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J | |
| R520 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J | |
| R530 | RD-AZ221J- | R CARBON FILM | 1/6 220 OHM J | |

| LOC | PART-CODE | PART-NAME | PART-DESC | REMARK |
|---|---|---|---|---|
| R533 | RD-AZ122J- | R CARBON FILM | 1/6 1.2K OHM J | |
| R539 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J | |
| R540 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J | |
| R543 | RD-AZ122J- | R CARBON FILM | 1/6 1.2K OHM J | |
| R544 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J | |
| R545 | ` | R CARBON FILM | 1/6 10K OHM J | |
| R552 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J | |
| R556 | RD-AZ561J- | R CARBON FILM | 1/6 560 OHM J | |
| R557 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J | |
| R558 | RD-AZ432J- | R CARBON FILM | 1/6 4.3K OHM J | |
| R562 | RD-AZ331J- | R CARBON FILM | 1/6 330 OHM J | |
| R563 | RD-AZ331J- | R CARBON FILM | 1/6 330 OHM J | |
| R564 | RD-AZ331J- | R CARBON FILM | 1/6 330 OHM J | |
| R565 | RD-AZ331J- | R CARBON FILM | 1/6 330 OHM J | |
| R566 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J | |
| R567 | RD-AZ331J- | R CARBON FILM | 1/6 330 OHM J | |
| R569 | RD-AZ331J- | R CARBON FILM | 1/6 330 OHM J | |
| R572 | RD-AZ331J- | R CARBON FILM | 1/6 330 OHM J | |
| R574 | RD-AZ331J- | R CARBON FILM | 1/6 330 OHM J | |
| R575 | RD-AZ331J- | R CARBON FILM | 1/6 330 OHM J | |
| R576 | RD-AZ331J- | R CARBON FILM | 1/6 330 OHM J | |
| R578 | RD-AZ331J- | R CARBON FILM | 1/6 330 OHM J | |
| R580 | RD-AZ331J- | R CARBON FILM | 1/6 330 OHM J | |
| R582 | RD-AZ472J- | R CARBON FILM | 1/6 4.7K OHM J | |
| R584 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J | |
| R586 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J | |
| R588 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J | |
| R802 | RD-4Z301J- | R CARBON FILM | 1/4 300 OHM J | |
| R803 | RD-AZ222J- | R CARBON FILM | 1/6 2.2K OHM J | |
| R804 | RD-AZ122J- | R CARBON FILM | 1/6 1.2K OHM J | |
| R807 | RD-4Z151J- | R CARBON FILM | 1/4 150 OHM J | |
| R811 | RD-AZ394J- | R CARBON FILM | 1/6 390K OHM J | |
| R814 | RD-4Z221J- | R CARBON FILM | 1/4 220 OHM J | |
| R815 | RD-AZ123J- | R CARBON FILM | 1/6 12K OHM J | |
| C539 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| C539 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP002 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP003 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP004 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP005 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP006 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP007 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP008 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP009 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP010 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP011 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |

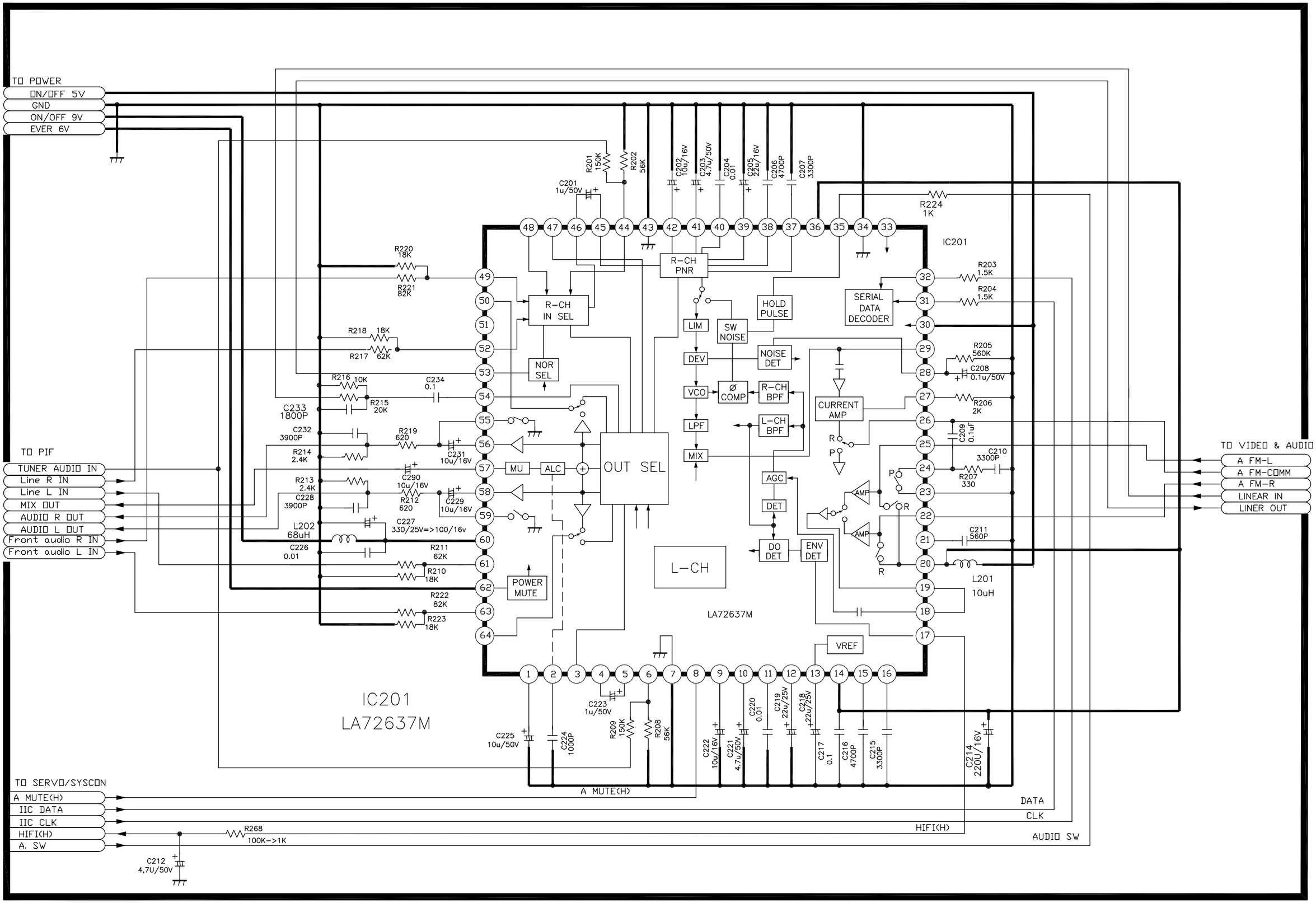
| LOC | PART-CODE | PART-NAME | PART-DESC | REMARK |
|---|---|---|---|---|
| JP012 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP013 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP014 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP015 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP016 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP017 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP018 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP019 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP020 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP021 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP022 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP023 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP024 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP025 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP026 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP027 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP028 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP029 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP030 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP031 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP032 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP033 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP034 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP035 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP036 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP037 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP038 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP039 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP040 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP041 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP042 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP043 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP044 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP045 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP046 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP047 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP048 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP049 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP050 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP051 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP052 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP053 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP054 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP055 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP057 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP058 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |

# ELECTRICAL PARTS LIST

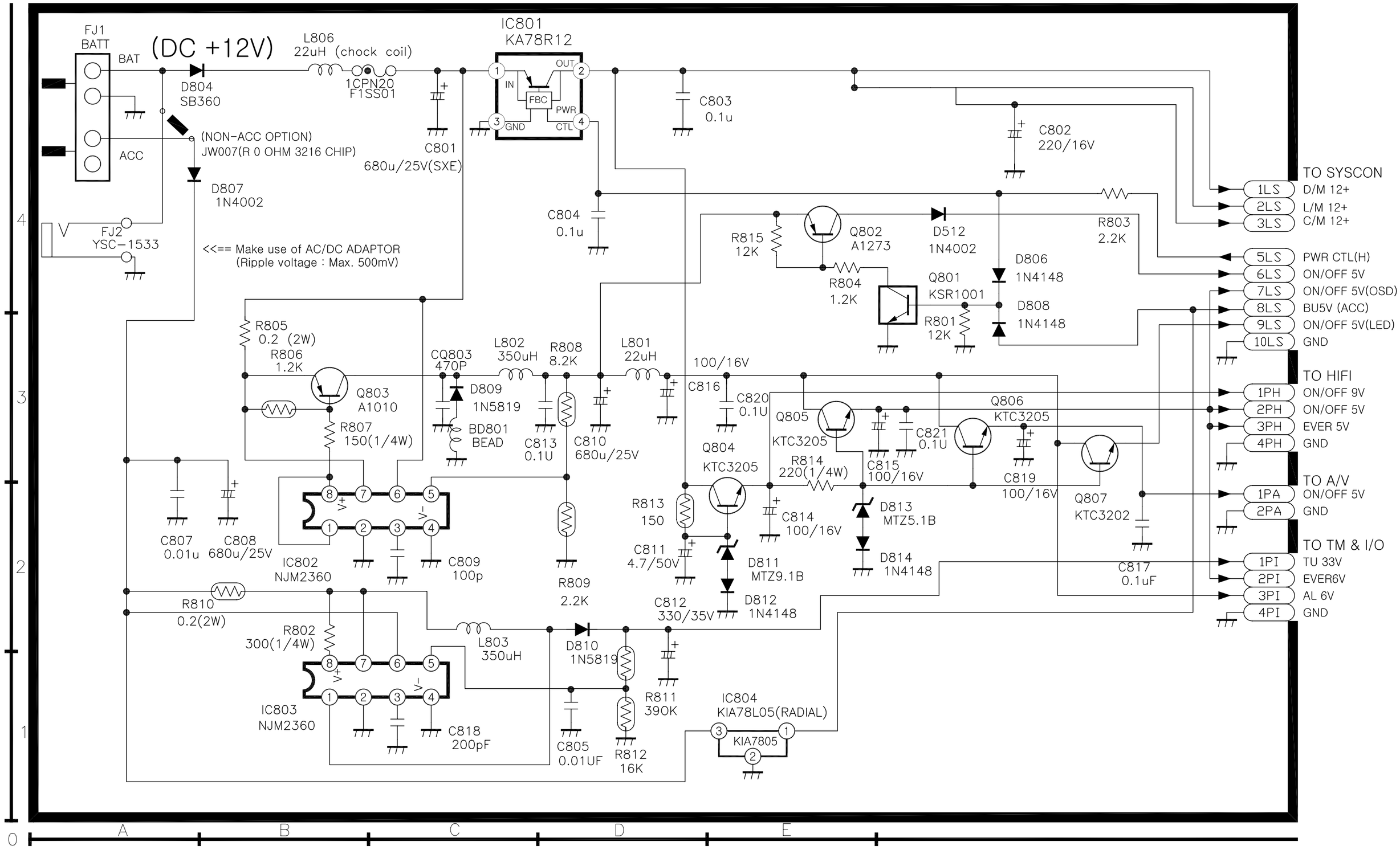
| LOC | PART-CODE | PART-NAME | PART-DESC | REMARK |
|---|---|---|---|---|
| JP059 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP060 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP061 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP062 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP063 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP065 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP067 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP068 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP069 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP070 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP071 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP072 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP073 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP074 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP075 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP077 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP080 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP081 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP082 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP083 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP084 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP085 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP086 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP087 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP089 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP090 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP097 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP098 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP099 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP100 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP101 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP102 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP103 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP104 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP105 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP106 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP107 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP108 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP110 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP111 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP112 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP113 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP115 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP116 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP120 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP121 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |

| LOC | PART-CODE | PART-NAME | PART-DESC | REMARK |
|---|---|---|---|---|
| JP122 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP123 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP124 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP125 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP126 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP128 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP129 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP133 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP134 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP136 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP137 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP138 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP139 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP140 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP141 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP143 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP144 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP148 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP149 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP151 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP152 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP153 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP154 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP156 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP157 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP161 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP164 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| JP169 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |
| D805 | 945S0001-- | WIRE COPPER | 0.6*43MM TAPING | |

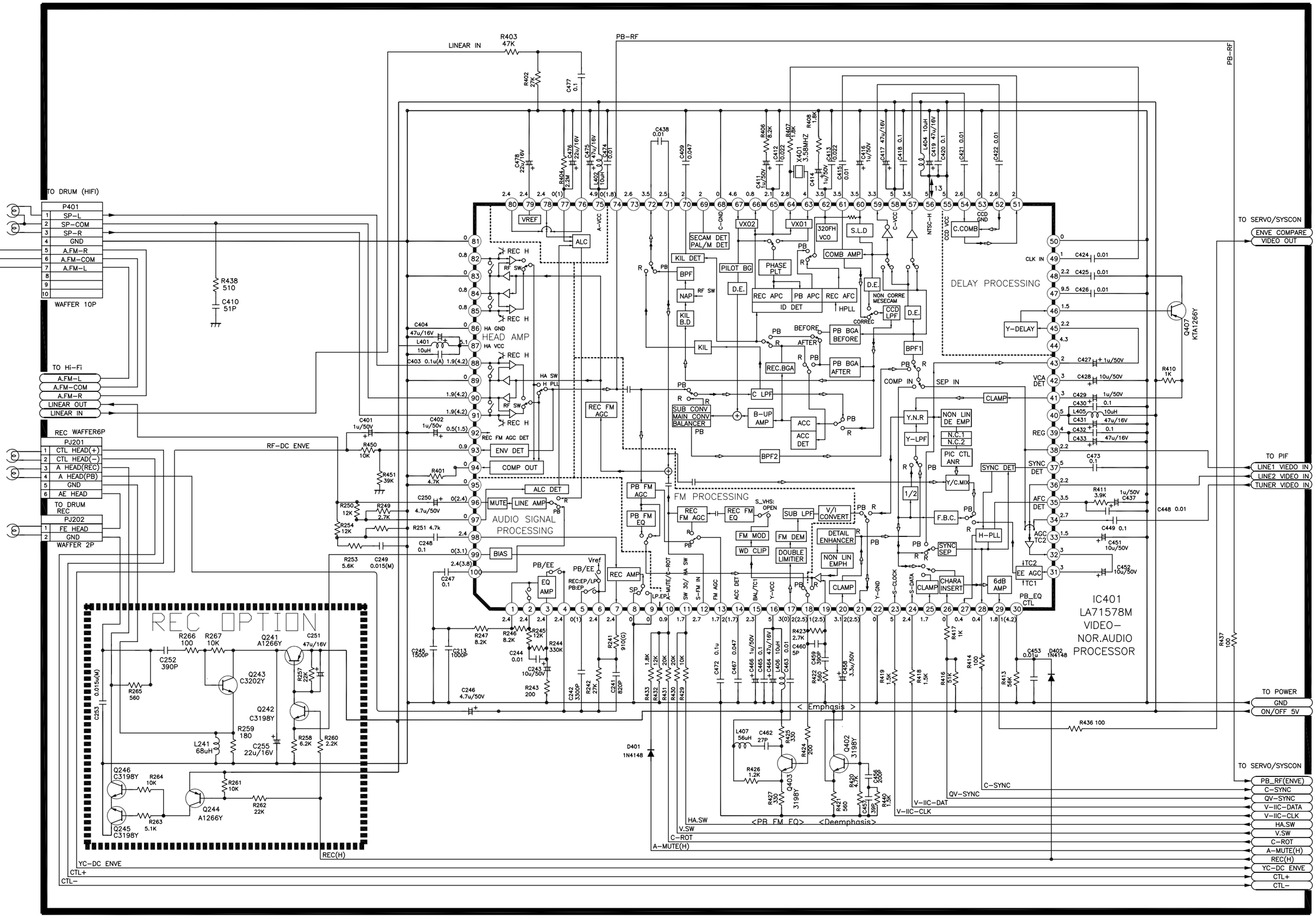
# Hi-Fi SCHEMATIC DIAGRAM



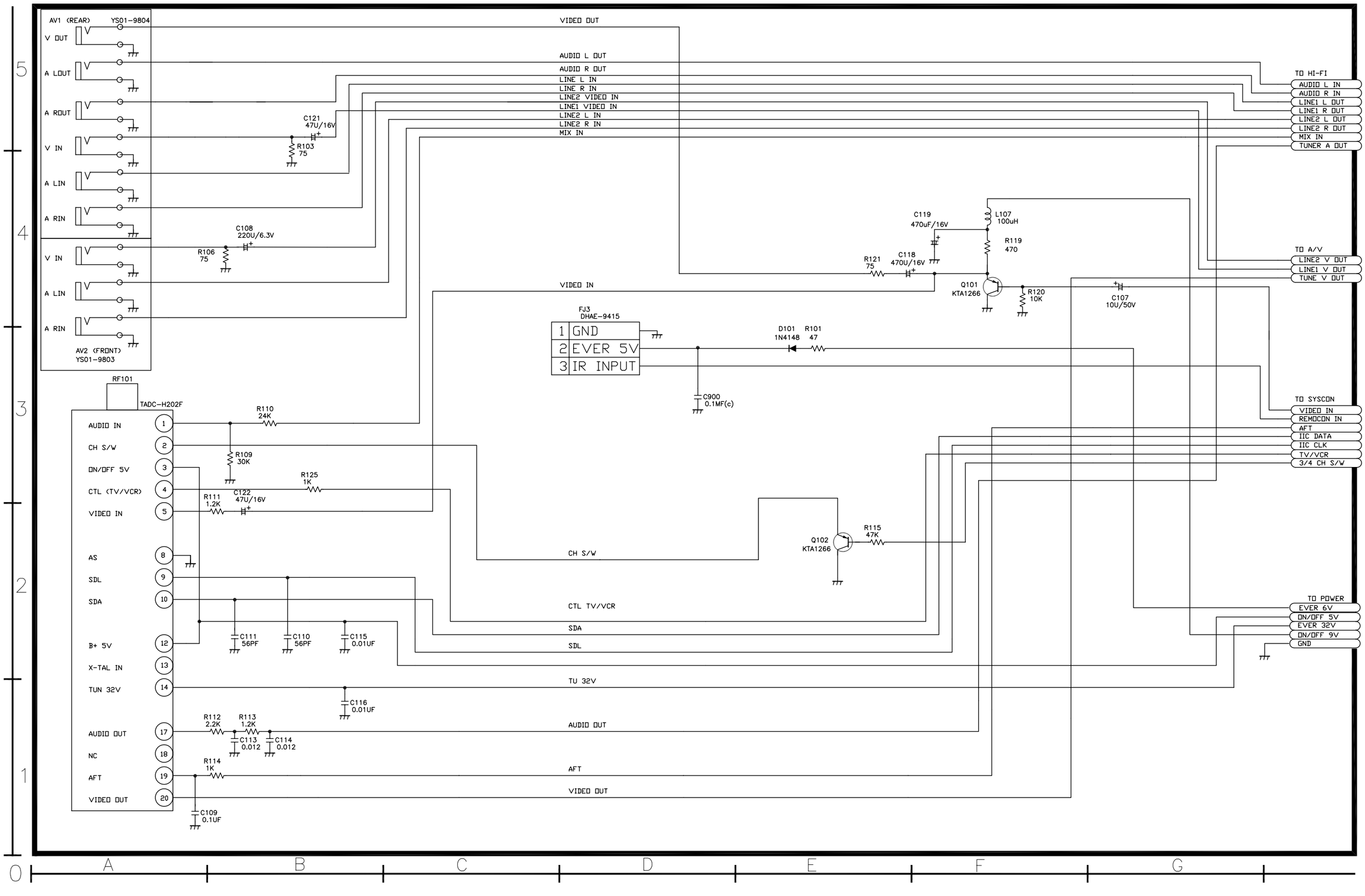
# POWER


FJ1
BATT
BAT
(DC +12V)
L806
22uH (chock coil)
D804
SB360
1CPN20
F1SS01
IC801
KA78R12
IN
OUT
FBC
PWR
GND
CTL
C803
0.1u
C802
220/16V
C801
680u/25V(SXE)
ACC
(NON-ACC OPTION)
JW007(R 0 OHM 3216 CHIP)
D807
1N4002
C804
0.1u
FJ2
YSC-1533
<<== Make use of AC/DC ADAPTOR
(Ripple voltage : Max. 500mV)
R815
12K
Q802
A1273
D512
1N4002
R803
2.2K
R804
1.2K
Q801
KSR1001
D806
1N4148
D808
1N4148
R801
12K
R805
0.2 (2W)
R806
1.2K
CQ803
470P
L802
350uH
R808
8.2K
L801
22uH
100/16V
C816
Q803
A1010
D809
1N5819
BD801
BEAD
C813
0.1U
C810
680u/25V
C820
0.1U
Q805
KTC3205
Q806
KTC3205
C821
0.1U
R807
150(1/4W)
Q804
KTC3205
R814
220(1/4W)
C815
100/16V
C819
100/16V
R813
150
C814
100/16V
D813
MTZ5.1B
Q807
KTC3202
C807
0.01u
C808
680u/25V
IC802
NJM2360
C809
100p
R809
2.2K
C811
4.7/50V
D811
MTZ9.1B
C817
0.1uF
R810
0.2(2W)
C812
330/35V
D812
1N4148
R802
300(1/4W)
L803
350uH
D810
1N5819
D814
1N4148
IC803
NJM2360
C818
200pF
C805
0.01UF
R811
390K
R812
16K
IC804
KIA78L05(RADIAL)
KIA7805
TO SYSCON
1LS D/M 12+
2LS L/M 12+
3LS C/M 12+
5LS PWR CTL(H)
6LS ON/OFF 5V
7LS ON/OFF 5V(OSD)
8LS BU5V (ACC)
9LS ON/OFF 5V(LED)
10LS GND
TO HIFI
1PH ON/OFF 9V
2PH ON/OFF 5V
3PH EVER 5V
4PH GND
TO A/V
1PA ON/OFF 5V
2PA GND
TO TM & I/O
1PI TU 33V
2PI EVER6V
3PI AL 6V
4PI GND

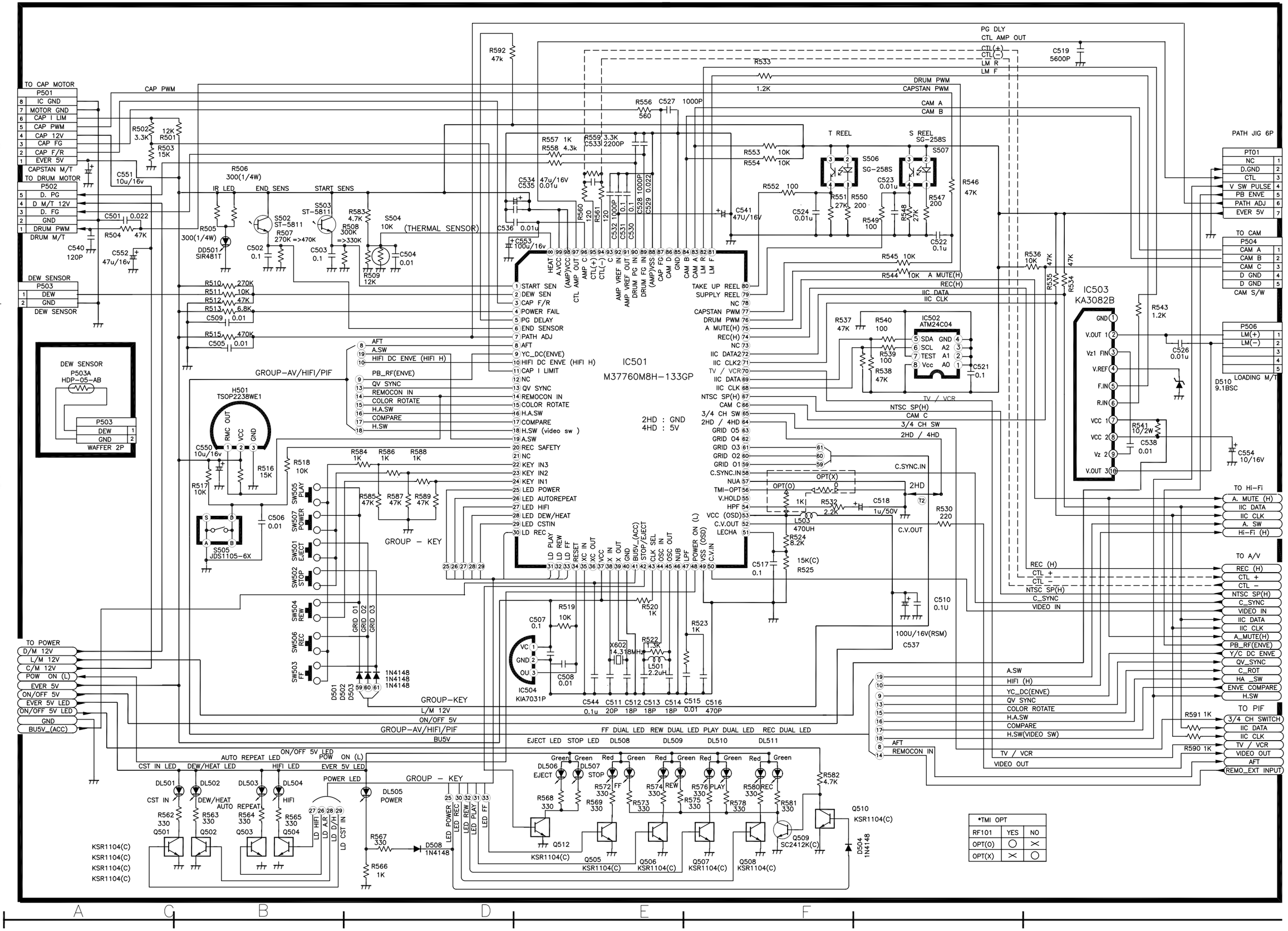
# VIDEO,AUDIO SCHEMATIC DIAGRAM



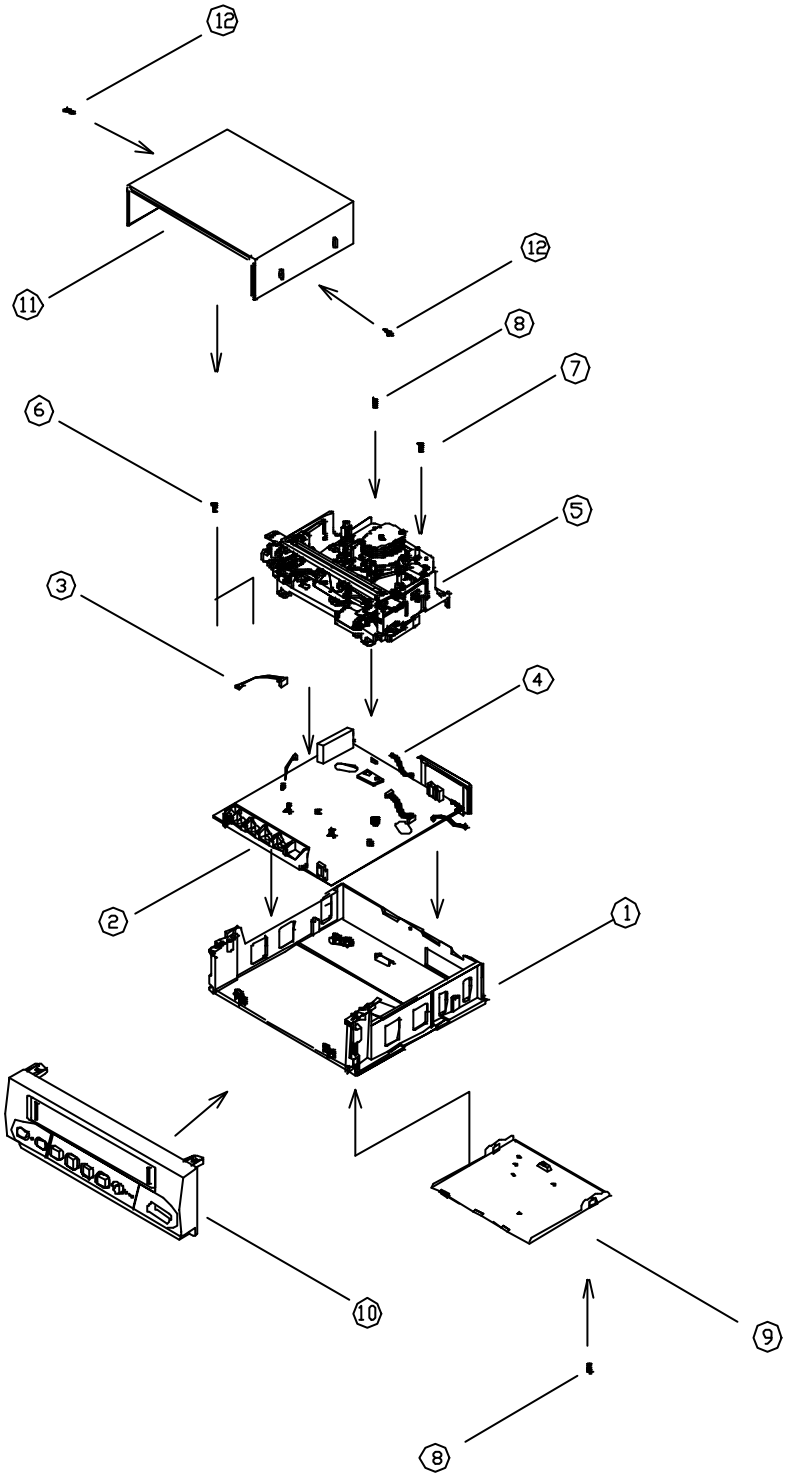
# PIF / IN OUTPUT CIRCUIT



# SERVO/SYSCON CIRCUIT DIAGRAM

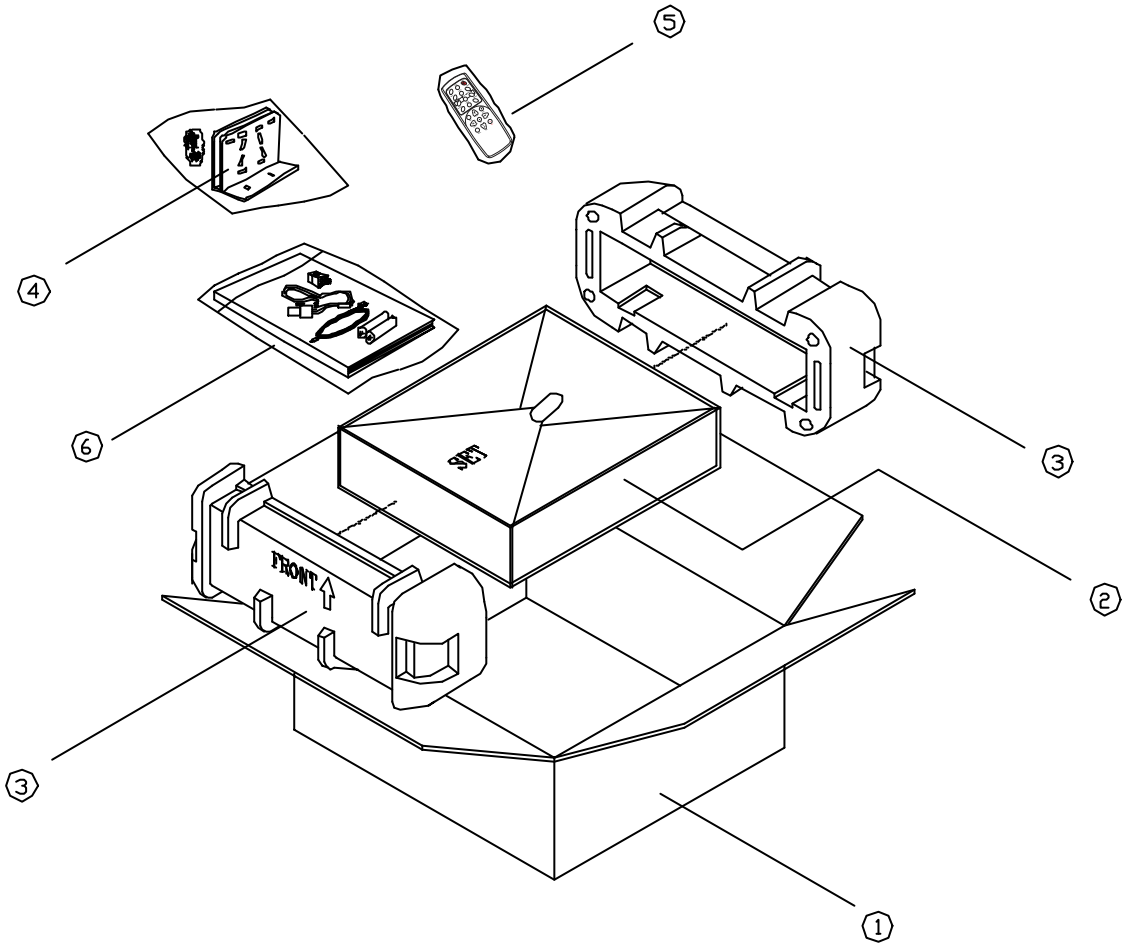


# SET TOTAL ASSEMBLY




| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | | BUTTOM COVER | 1 | SECC T0.4 | | 14 | | | | | |
| 6 | | SCREW TAPPTITE | 1 | TT2 BIN 3X6 MFSN | DECK+DEW | 13 | | | | | |
| 5 | | DECK TOTAL A'Y | 1 | S14-MECHA | | 12 | | SCREW TAPPTITE | 4 | TT2 BIN 4X12 BK | |
| 4 | | FFC CABLE | 1 | | | 11 | | TOP COVER | 1 | PCM T0.5 BK | |
| 3 | | DEW SENSOR | 1 | HDP-05-A8 | | 10 | | PANEL FRONT AS | 1 | HI-PS (V0) | |
| 2 | | PCB MAIN AS | 1 | AS | | 9 | | SCREW TAPPTITE | 5 | TT2 BIN 4X12 MFZN | D/K ANT+BUTTOM FIX |
| 1 | | CHASSIS MAIN | 1 | HI-PS(V0) | | 8 | | SCREW TAPPTITE | 1 | TT2 BIN 2.6X6 MFSN | DECK+SHILD FIX |
| NO. | PART NO. | PART NAME | QUANTITY | MATERIAL | REMARK | NO. | PART NO. | PART NAME | QUANTITY | MATERIAL | REMARK |

# PACKING AS




| 6 | | ACCESSORY AS | 1 | AS | |
|---|---|---|---|---|---|
| 5 | | REMOCOM AS | 1 | AS | |
| 4 | | BRKR MOUNT AS | 1 | AS | |
| 3 | | PED F/B | 1 | EPS | |
| 2 | | SET | 1 | AS | |
| 1 | | CARTONE BOX | 1 | K200*K180*S200 | |
| NO. | PART NO. | PART NAME | QUANTITY | MATERIAL | REMARK |

# Technical Service Guide

## VCR MECHANISM UNIT

## S14-MECHA

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# 1. CHARACTERISTIC OF THE S14-MECHA DECK

1) S14-MECHA DECK satisfies both the VHS and NTSC/PAL specifications.
2) S14-MECHA DECK is driven by three motors (DRUM MOTOR, CAPSTAN MOTOR and L/C MOTOR).
3) S14-MECHA DECK uses the L/C MOTOR to carry out FRONT LOADING.
4) S14-MECHA DECK System has six operating Modes (EJECT, INITIAL, FF/REW, BRAKE, REVIEW and PLAY mode), and each mode is recognized by 4bits signal mode switch, which is driven by the L/C MOTOR.
5) The CST IN-PLAYING of S14-Mecha is carried out after Mi-com congnizes the point light transmitted start sensor during F/L drive rack is back, When CST inserts.
6) S14-MECHA DECK eliminated the deck PCB and directly connects the main PCB with the 3 main parts (Drum motor, Capstan motor, Cam Switch) by using the board to board type connector.

## 2. DESCRIPTION OF THE MODES

### 1) EJECT MODE

A. The Cassette-In/Out operation is performed in this mode. The cassette In/Out Operation is initiated by the rotation of the L/C motor to which the Front-Loading driving parts are directly related.

The cassette-in operation : Cassette-in movement starts when the light transmits start sensor as F/L drive rack is back by CST inserting proper power.
If there is not no copy Tap. CST-IN movement is carried out Play mode.

The cassette-out operation : The Cassette Holder Assembly is located at the entrance of the Front Panel, and only the Cassette-In operation can be executed.

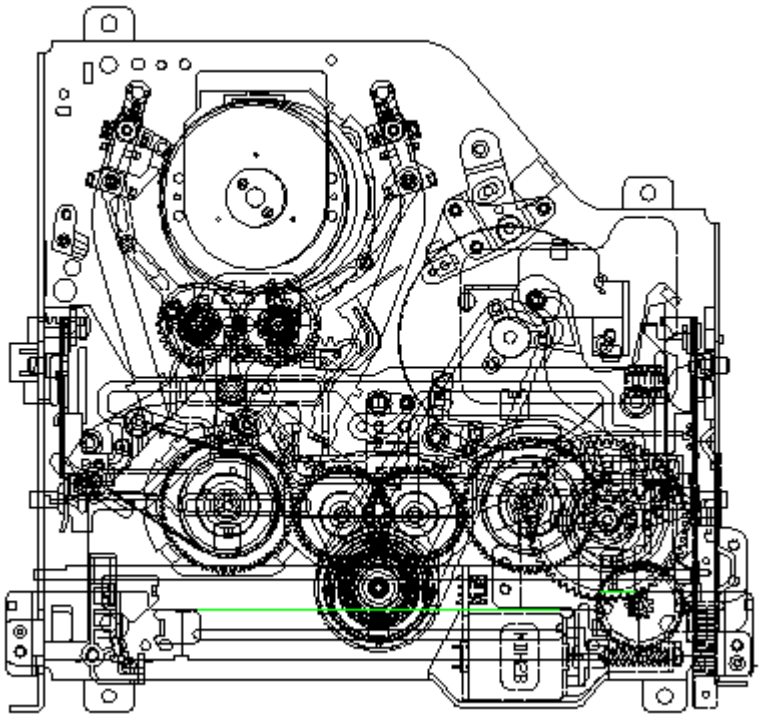
B. Mechanical Arrangement

a. The Band Brake is released from the S Reel Table.

b. The S & T Sub Brake is attached to the S/T-Reel Table.

c. The IDLER GEAR is attached to the S-Reel Table.

EJECT MODE



## 2) INITIAL MODE

A. This mode is used as a reference mode for unloading location when power is off.

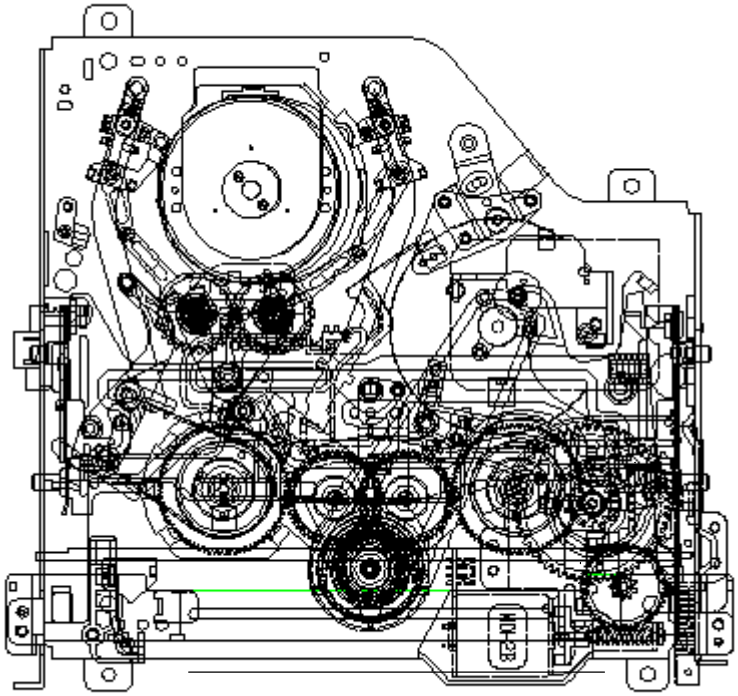
B. The Configuration of appliance

a. The BAND BRAKE is released from the S-REEL TABLE.

b. The S/T SLANT POLE AS is in the unloading condition.

c. The S/T SUB BRAKE is attached to the S/T REEL TABLE.

INITIAL MODE



### 3) FF/REW MODE

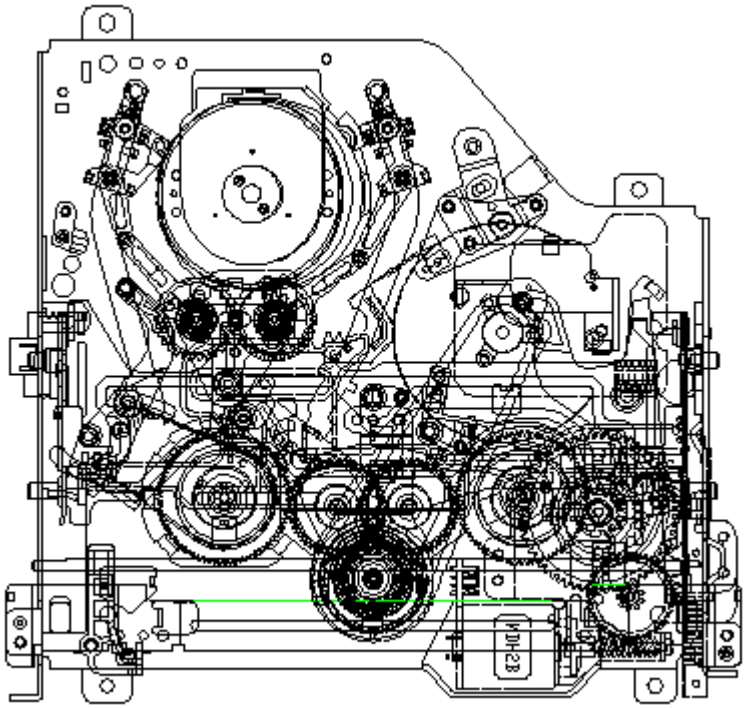
A. This is the mode that conducts the fast forward winding and rewinding of tape by rotating the Capstan Motor at high speed to the clockwise and counter-clockwise direction and running the Reel Table.

a. The configuration of appliances a. The S/T slant pole assembly is in the unloading condition.

b. The Band Brake is separated from the S-Reel Table.

c. The S/T Sub Brake is attached from the S/T Reel Table. /REW MODE

FF/REW MODE



## 4) BRAKE MODE

A. The BRAKE mode is configured between the FF/REW mode and the Loading section. When the PLAY, STOP or EJECT button is pushed during FF/REW, S/T-Reel Table stops immediately so that it prevents the loosening of cassette tape by the law of inertia. Therefre the BRAKE mode becomes the criteria of the unloading location when the power is off.

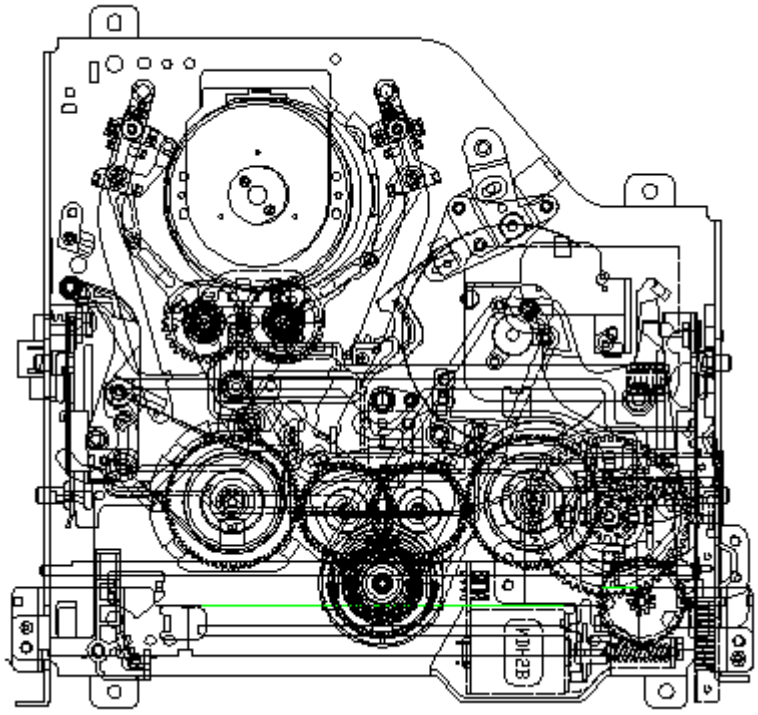
B The configuration of appliances

a. The S/T Slant Pole Assembly is in the unloading condition.

b. The Band Brake is separated from the S-Reel Table.

c. The S/T Sub Brake is attached to the S/T Reel Table.

BRAKE MODE



## 5) REVIEW MODE

A. The Review Search operation is performed in this mode. This mode is obtained by pressing the REW button in the state of playing. The L/C motor is rotated until the Cam Switch detects the REVIEW mode. When the Cam Switch detects the REVIEW mode, the L/C motor is stopped and shortly afterwards the Capstan starts to rotate CCW to transport the tape in reverse.

B. The Configure of appliance

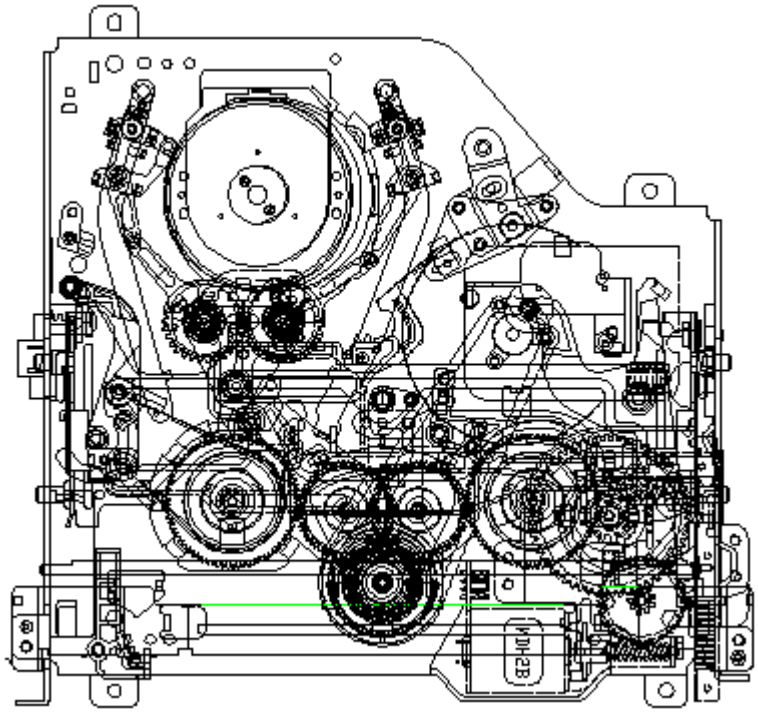
a. The BAND BRAKE is released from the S-REEL TABLE.

b. The PINCH ROLLER is applied to the CAPSTAN SHAFT.

c. The S-SUB BRAKE is released from the S-REEL TABLE.

d. The T-SUB BRAKE is applied to the T-REEL TABLE.

REVIEWMODE



## 6) PLAY/STOP/CUE/RECORD MODE

A. The PLAY/STOP/CUE/RECORD mode performs the playback and recording while moving the tape from the S-Reel Table to the T-Reel Table at a constant speed. When the Slow function is added, it can run at the PLAY mode.

B. The configuration of appliances

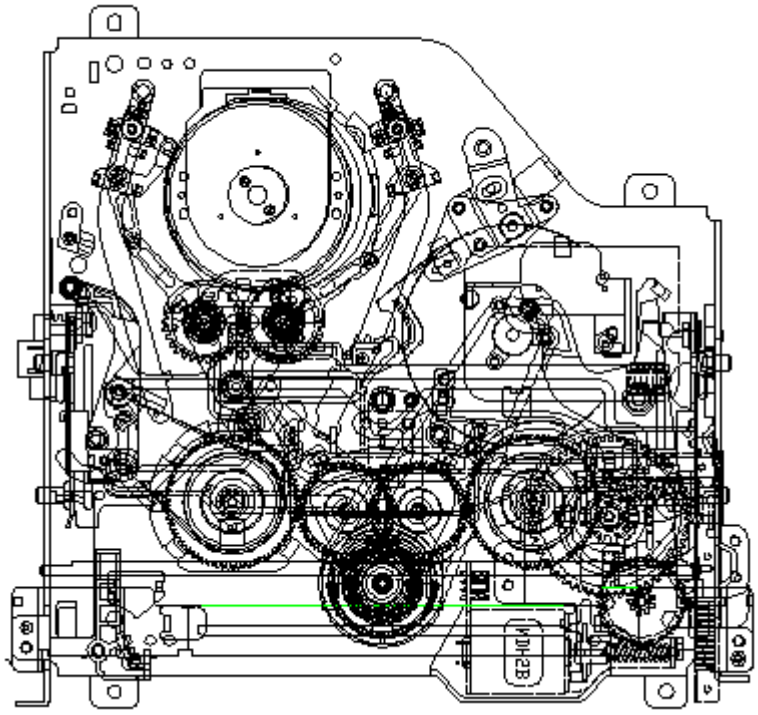
a. The Tension Pole is in the given location.

b. The Band Brake is attached to the S-Reel Table to perform the Tension Servo.

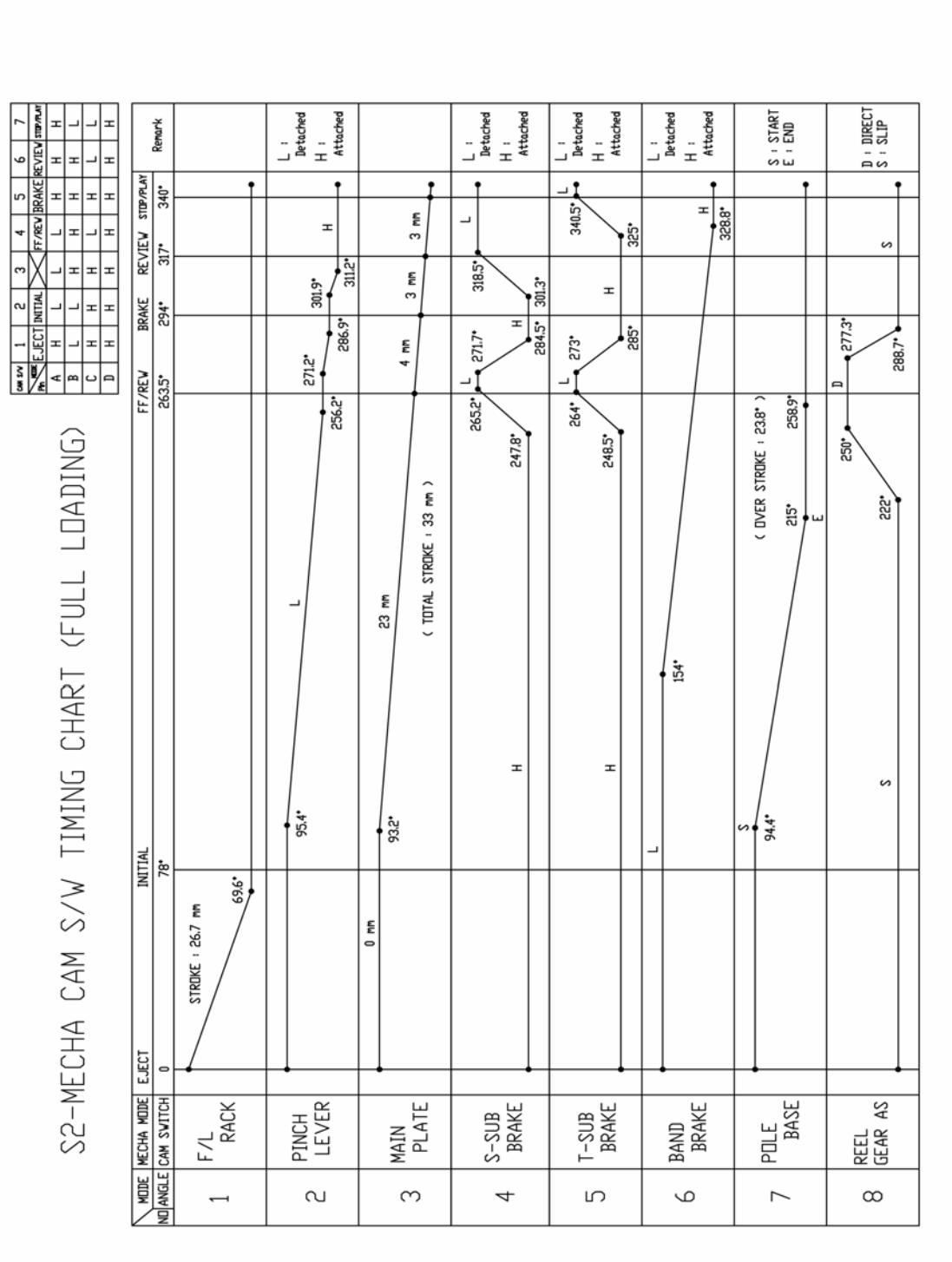
c. The S/T-Sub Brake is separated from S/T-Reel Table.

d. The Pinch Roller is attached to the Capstan Shaft.

PLAY/STOP/CUE/RECORD MODE

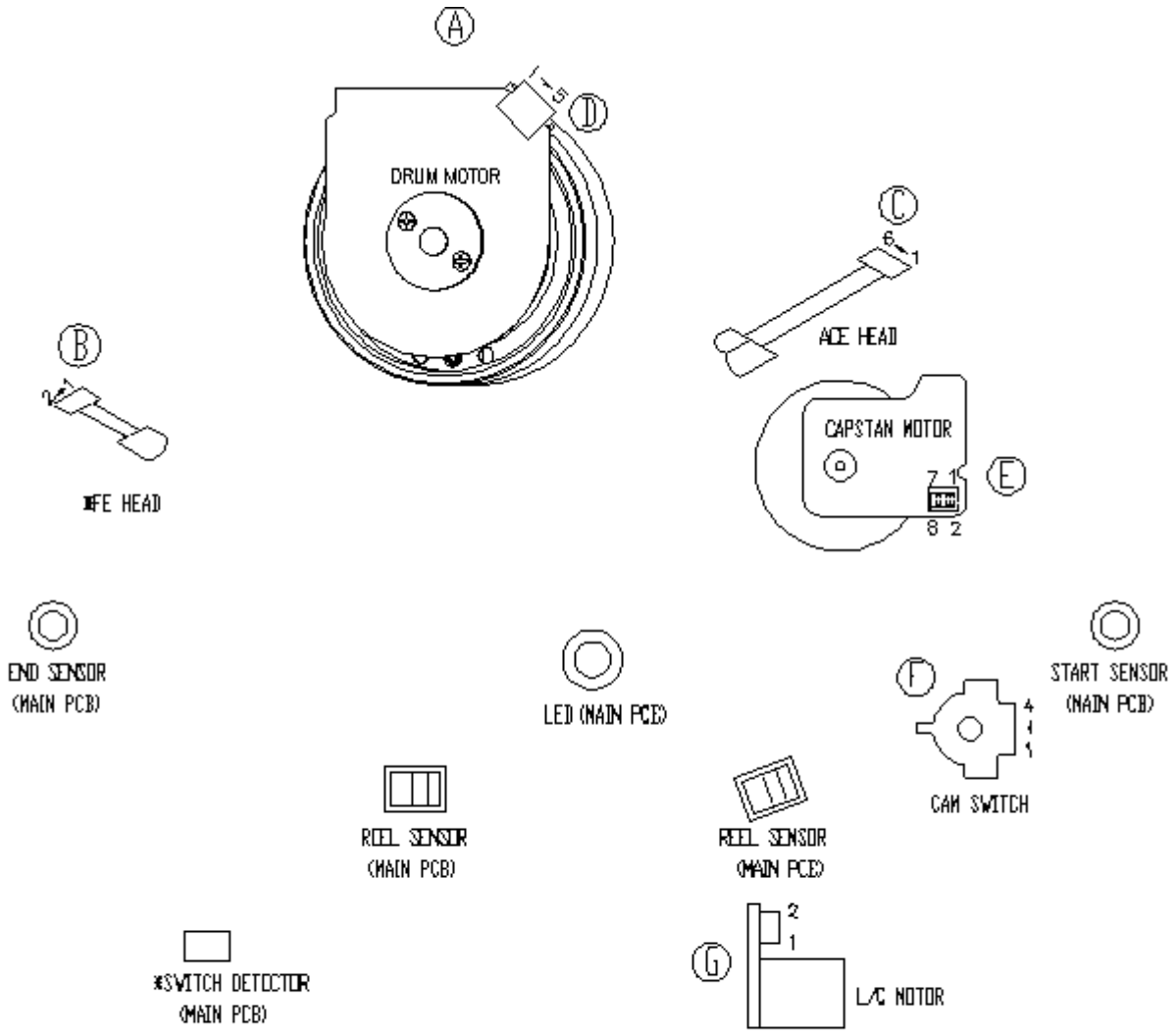


## 3. TIMING CHART OF S14-MECHA DECK



## 4. S14-MECHA DECK WIRE DIAGRAM

### 1) WIRE DIAGRAM

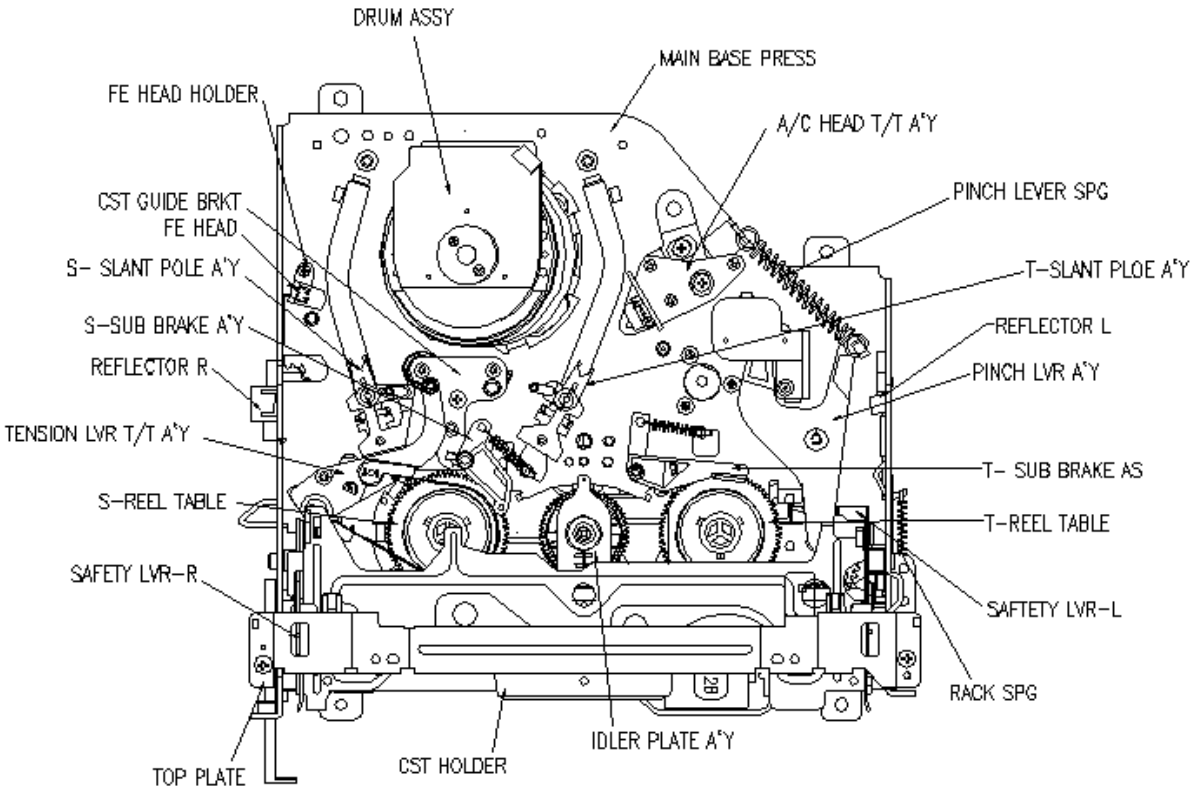


# 2. MAINTENANCE AND CHECKING OF MAJOR SYSTEM

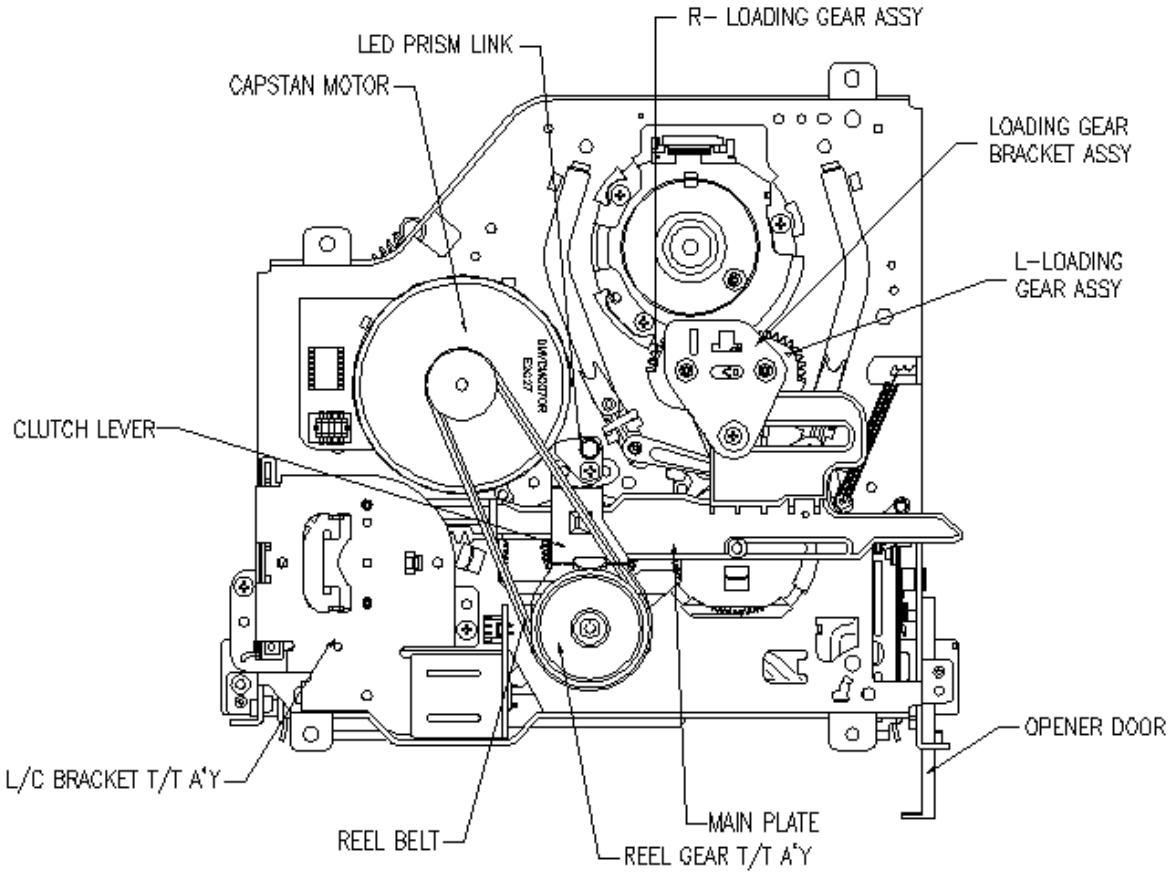
## 1. NAMES OF MAJOR PARTS AND AREA

### 1) NAMES OF MAJOR PARTS

A. Top View



**B. Bottom View**



## 2. .MAINTENANCE AND PERIODIC CHECKING TABLE OF S14-MECHA DECK

### 1) MAINTENANCE AND GENERAL INFORMATION

A. To guarantee the perfect performance and the function of S14-MECHA Deck and also to use the tape for the long life, you should conduct the periodic maintenance and checking.

- Replacement after checking
- Conduct replacement and checking without regard to the time used.

B. Cleaning of the rotary Head Drum

- To clean the rotary Head Drum, wet a towel with non-water added alcohol to clean the surface of the Drum gently while rotating the Head Drum Assembly by hands slowly. (Warning : Do not clean while running the Head Drum by motor.)
- Do not clean the Drum with the towel paralleling with Head tip vertically. (The Head tip is very fragile.)

C. Cleaning of the Tape Transporting section

Clean the tape Running Mechanism using the towel or the cotton swab wet with non-water added alcohol.

D. Cleaning of the operating parts.

Clean the operating parts using the towel or a cotton swab wet with non-water added alcohol.

E. Checking Procedure

Do maintenance and checking according to the checking table.

## 2) CLEANING AND GREASING

A. Cleaning

a. Tape Running Mechanism (Clean it every 500 hours of actual using time.)

Tension Pole S-Slant Pole Ace Head
S-Guide Post Video Head/Drum Ass'y T-Guide Post
FE-Head T-Slant Pole Capstan shaft
S-Guide Roller T-Guide Roller Pinch Roller

Since the above mentioned parts directly contact with tapes, they can be easily contaminated by dust or foreign matters. Also if they are contaminated by dust or foreign matters, they can affect the conditions of display directly and damage the tapes.

Before inserting a cassette tape into the deck, make sure these parts are completely dried after cleaning with a non-water added alcohol.

b. Operating Parts (Clean it every 1,000 hours of actual using time.)

S-Reel Table Reel Belt Capstan Fly-Wheel/Pulley
T-Reel Table Reel Pulley

B. Lubrication (Apply grease on parts every 2,000 hours of actual using time for lubrication.)

S-Reel Table Post T-Reel Table Post Reel Gear Post
Teeth and Surface of the Cam Gear Main Base Area
(S/T Slant Pole Ass'y and the moving area of Cassette Holder Ass'y)

Apply grease on the above parts after cleaning with non-water added alcohol, but do not apply excessively.

### 3) MAJOR PARTS SERVICE SCHEDULE

Conduct the maintenance and the replacement of the major parts according to the below table based on the actual using time.

| NAME | Maintenance period (Hrs) | | | | |
|---|---|---|---|---|---|
| | 1000 | 2000 | 3000 | 4000 | 5000 |
| DRUM PRICE AS | | ❍ | ☯ | ❍ | ☯ |
| CAPSTAN MOTOR | | ❍ | | ❍ | |
| L/C BRKT TOTAL AS | | ❍ | | ❍ | |
| REEL BELT | | ❍ | ☯ | ❍ | ☯ |
| IDLER PLT AS | | ☯ | | ❍ | |
| S/T REEL TABLE AS | | ☯ | | ❍ | |
| T-SUB BRAKE AS | | ❍ | | ❍ | |
| BAND BRAKE AS | | ❍ | | ❍ | |
| MAIN PLATE | | ❍ | | ❍ | |
| L-LOADING AS | | ❍ | | ❍ | |
| PINCH LEVER T/T AS | | ☯ | ❍ | | ☯ |
| ACE HEAD T/T AS | | | ❍ | | |
| FE HEAD | | | | | ❍ |
| REEL GEAR TOTAL AS | | ☯ | ❍ | | ☯ |

☯ : Check and replace parts if necessary. ❍ : Replacement.

## 3. JIGS AND TOOLS FOR S14-MECHA DECK

### 1) JIG AND TOOL LIST

| NO | ITEMS | MODEL | FIG. NO | REMARKS |
|---|---|---|---|---|
| 1 | ALIGNMENT TAPE | - NTSC : SP STAIRSTRP 7KHz<br>SP COLOR BAR 1KHz<br>- PAL : SP STAIRSTRP 6KHz<br>SP COLOR BAR 1KHz | ① | Adjustment & Check of Tape Running System |
| 2 | CLEANING TAPE | | ② | Cleaning of the Tape Running System |
| 3 | CST TORQUE METER | KT-300NV(K-MEDIA)<br>KT-300RV(K-MEDIA) | ③ | Measurement of REEL Torque |
| 4 | DIAL TORQUE GAUGE | | ④ | Measurement of S,T-SUB BRAKE Torque |
| 5 | TENTELLOMETER | T2-H7-UM | ⑤ | Measurement of Back Tension |
| 6 | PUSH-PULL GAUGE | ABOVE 2Kg | ⑦ | Measurement of the pressure of Pinch Roller |
| 7 | TENSION GAUGE | | ⑧ | Measurement of Idler Torque |
| 8 | +,- DRIVER<br>PATH DRIVER | | ⓐ,<br>ⓑ<br>ⓒ<br>ⓓ | Assembling & Disassembling<br>Adjustment<br>Adjustment |

# 3. DISASSEMBLY AND REPLACEMENT

## 2) SKETCHS OF JIGS AND TOOLS

## 2. REPLACEMENT OF F/LOADING ASS'Y (Fig. 31)

1) Unscrew 2 of the Top Plate fixing screws ② tightened with the Main Base Press ① and separate the Top Plate ③ from the main body.
2) Disassemble the F/L Door Opener ⑤ after pushing the Cassette Holder Ass'y ④ about 20 30 ㎜ to the cassette-in direction(Arrow Direction).
3) Lift the right side of the Cassette Holder Ass'y ④ up and disassemble it after pushing it thoroughly to the cassette-out direction(Anti-Arrow Direction) but be cautious of its distortion.
4) Turn the Shaft Holder ⑥ 90 ° to the clockwise direction and separate it from the Main Base Press ①.
5) Push the Loading Lever Ass'y ⑦ to the left, and lift the right side of it up to disassemble.
6) Replace with new parts and assemble them by the reversing procedure of the disassembly.

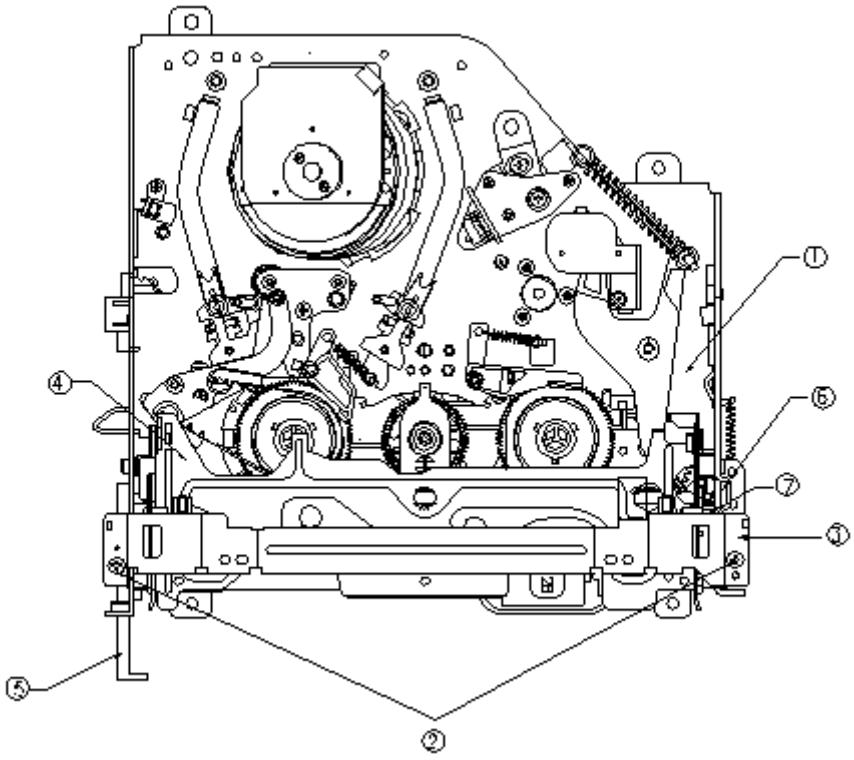



Figure 3-1

## 3. REPLACEMENT OF S.T-REEL TABLE ASS'Y (Fig. 3-2)

1) Release the T-Sub Brake Spring ② connected to the Main Base Press ① from the hook.
2) Turn the T-Sub Brake Ass'y ③ to the counter-clockwise direction, and lift it up for disassembly.
3) Release the S-Sub Brake Spring ④ connected to the Main Base Press ① from the hook.
4) Turn the S-Sub Brake Ass'y ⑤ to the counter-clockwise direction, and lift it up for disassembly.
5) Release the Tension Lever Spring ⑥ from the Main Base Press ① to remove the Poly Washer ⑦, and lift the Tension Lever Ass'y ⑧ up for disassembly.
6) Disassemble the S/T-Reel Table Ass'y ⑨&⑩ by lifting up. However be careful not to damage the teeth of gears.
7) Replace with new parts and assemble them by the reversing procedure of the disassembly.

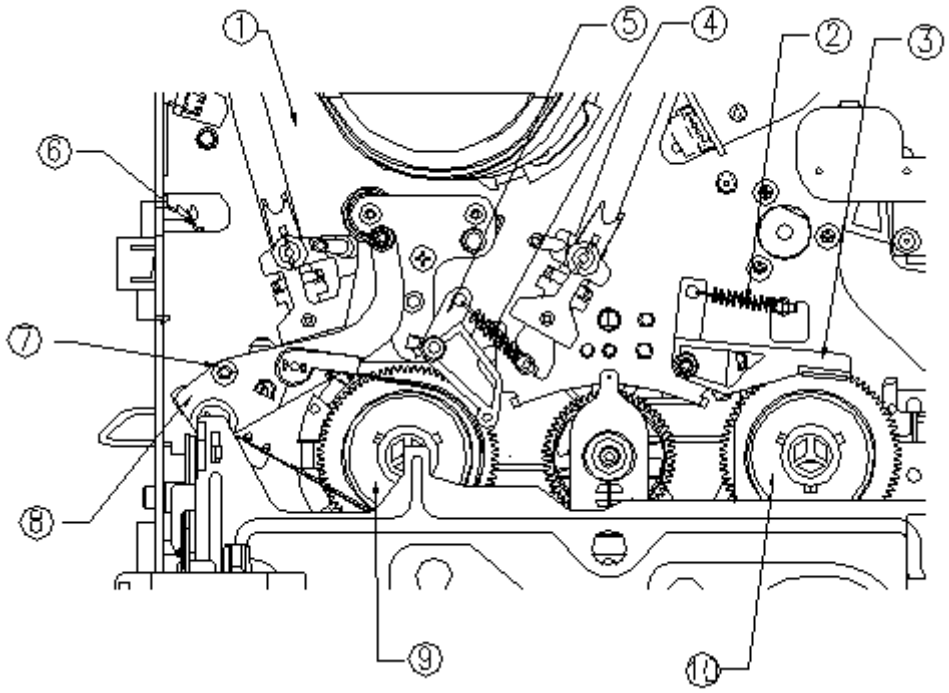



Figure 3-2

## 4. REPLACEMENT OF PINCH LEVER TOTAL ASS`Y (Fig. 3-3)

1) Push the hook area of the Cassette Cap Opener ① to the Y-axle direction and lift it up to separate from the Main Base Press ②. Be cautious of breakage of Hook.
2) Disassemble the Pinch Lever Spring ③.
3) Disassemble the Pinch Lever Total Ass'y ⑤ next the Poly Washer ④, but be careful not to contaminate the Pinch Roller ⑥.
4) Replace with new parts and assemble them by the reversing procedure of the disassembly.

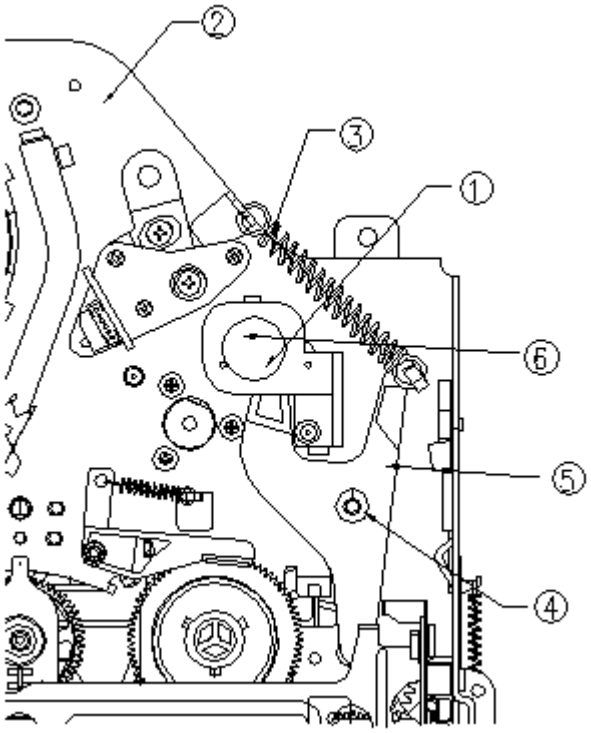



Figure 3-3

## 5. REPLACEMENT OF S,T SLANT POLE ASS`Y (Fig. 3-4)

Disassemble the Pinch Lever Total Ass'y first before the S/T Slant Pole Ass'y.

1) Turn over the deck, and unscrew 2 of the L/C BRKT Total Ass'y ② fixing screws ③ tightened with the Main Base Press ①. And then remove the L/C BRKT Total Ass'y ② from the main body.
2) Disassemble the Reel Gear Total Ass'y ⑥ after removing the Reel Belt ④ and the Poly Washer ⑤.
3) Unscrew the fixing screw ⑧ for the LED Prism ⑦ tightened with the Main Base Press ①, and remove the LED Prism ⑦ and the Clutch Lever ⑨.
4) Unscrew 2 of the fixing screws ⑪ for the Loading Gear Bracket Ass'y ⑩ tightened with the Cassette Guide BRKT, and then remove the Loading Gear Bracket Ass'y ⑩ by pushing it slightly to the plus Y-axle direction.
5) Remove the Poly Washer ⑫ and then disassemble the Main Plate ⑬.
6) Disassemble the R-Loading Ass'y ⑭ and L-Loading Ass'y ⑮ in sequence. And then remove the S/T Slant Pole Ass'y (16, 17) by pushing them slightly to the minus Y-axle direction.
7) Replace with new parts and assemble them by the reversing procedure of the disassembly.

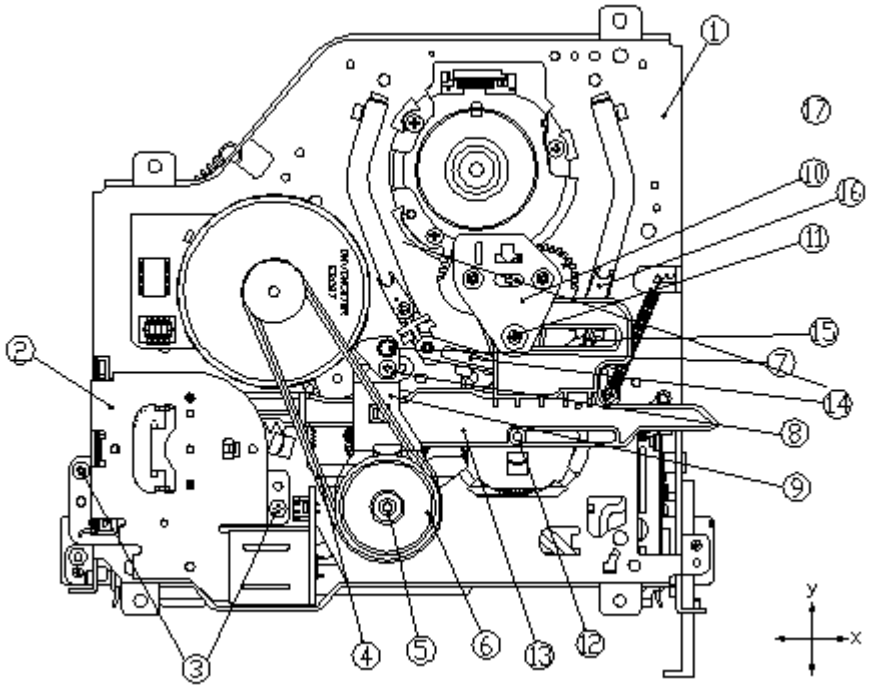



Figure 3-4

## 6. REPLACEMENT OF DRUM PRICE ASS`Y (Fig. 3-5)

1) Turn over the Deck Assembly.
2) Unscrew 3 of the fixing screws ② for the Drum Price Ass'y tightened with the Main Base Press ①, and disassemble the Drum Price Ass'y ③.
3) Replace the Drum as the Drum Price Ass'y package. The assembling is proceeded by the reversing order of the disassembling procedure.
4) Check the running conditions of tapes after replacement. If the adjustment of Running Mechanism is needed, adjust depending on the adjustment method of the Running Mechanism(Refer to the Chapter 5).

Notes :

- In disassembling the Drum Price Ass'y, pay attention to the distortion of the Leaf Spring Ass'y ⑤ within the Loading Gear Bracket Ass'y ④.
- Be careful not to damage the Head, not to contaminate the surface of the Drum, or not to scratch it when you repair or replace the Drum Price Ass'y.
- When the playback screen is abnormal, clean the Head and check the conditions of connectors. If the playback condition does not improve after these efforts, replace the Drum Price Ass'y.

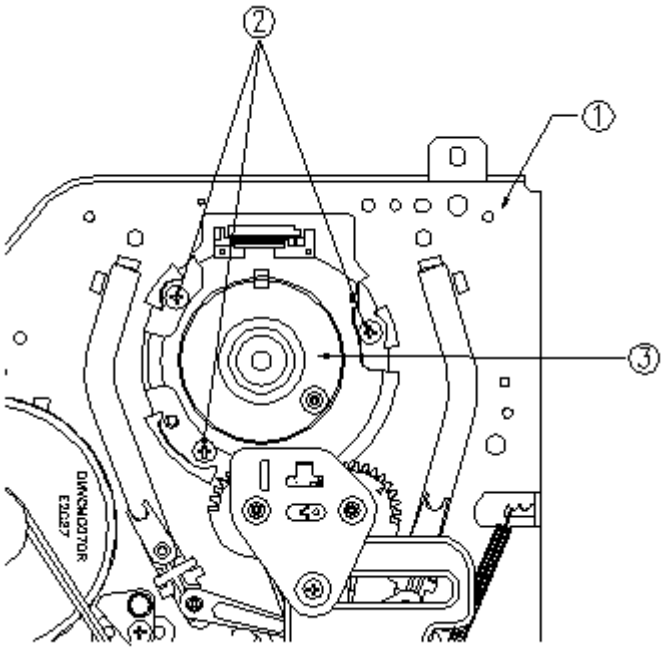



Figure 3-5

## 7. REPLACEMENT OF CAPSTAN MOTOR (Fig. 3-6)

1) Turn over the Deck Ass'y upside down and disassemble the Reel Belt ①.
2) Turn over Deck Ass'y to the upper part and unscrew 3 of the fixing screws ② for the Capstan Motor. Disassemble the Capstan Motor ③ from the lower part of the Deck Ass'y.

## 8. REPLACEMENT OF ACE HEAD TOTAL ASS`Y (Fig. 3-6)

1) Unscrew 2 of the fixing screws ④ for the ACE Head Total Ass'y, and disassemble the ACE Head Total Ass'y ⑤. But be careful not to contaminate it.
2) Replace with new parts and assemble them by the reversing procedure of the disassembly.
3) Adjust the Running Mechanism depending on the adjusting method(Refer to Chapter 5).

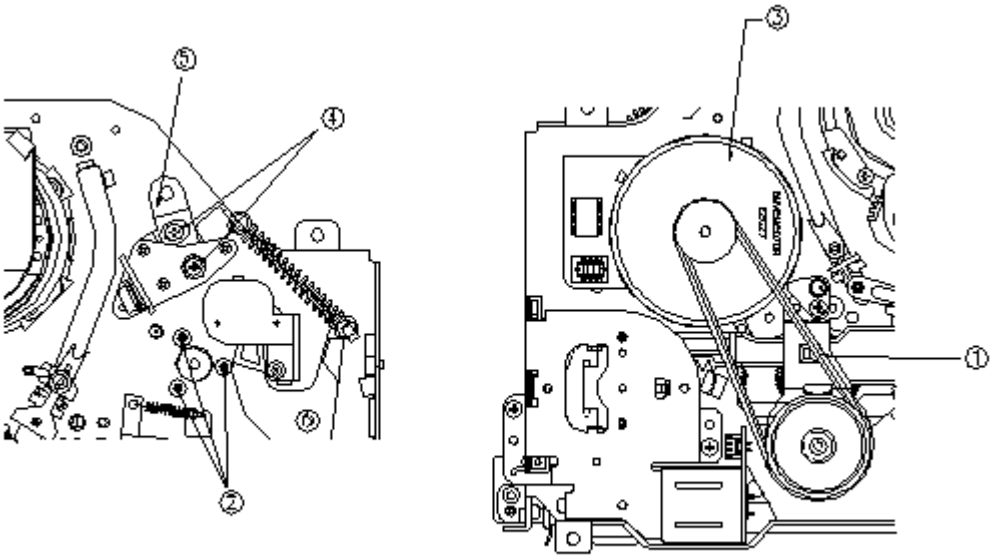



Figure 3-6

## 9. REPLACEMENT OF L/C BRKT TOTAL ASS'Y (Fig. 3-7)

Disassemble the Pinch Lever Total Ass'y first before disassembling it.

1) Turn over the Deck Ass'y upside down.
2) Unscrew 2 of the fixing screws ① for the L/C Bracket Total Ass'y and disassemble the L/C Bracket Total Ass'y ②.
3) Replace with new parts and assemble them by the reversing procedure of the disassembly.
4) Reassembling is done by checking the assembly location of L/C Bracket Total Ass'y (Refer to Pic. 4-1) pushing the Main Plate ③ completely to the right side to fix it firmly in the right position.

## 10. REPLACEMENT OF MAIN PLATE ASS'Y (Fig. 3-7)

Disassemble the Pinch Lever Total Ass'y first before disassembling it.

1) Disassemble the L/C Bracket Total Ass'y ②.
2) Disassemble the Reel Belt ④ before removing the Poly Washer ⑤.
3) Disassemble the Reel Gear Total Ass'y ⑥.
4) Unscrew the fixing screws ⑧ for the LED Prism ⑦ before removing the LED Prism and the Clutch Lever ⑨.
5) Unscrew the fixing screws ⑪ for the Loading Gear Bracket Ass'y ⑩ and push it slightly to the plus Y-axle direction for disassembly.
6) Disassemble the Main Plate ③ after removing the Poly Washer ⑫.
7) Replace with new parts and assemble them by the reversing procedure of the disassembly.

Notes

* Be cautious of the distortion of the Main Plate when assembling and disassembling it.
* Be careful not to contaminate the Reel Belt with oil or grease when assembling and disassembling it.
* Push the Main Plate slightly to the minus X-axle direction to assemble Clutch Lever. And then stick the Main Plate fast to the right side.

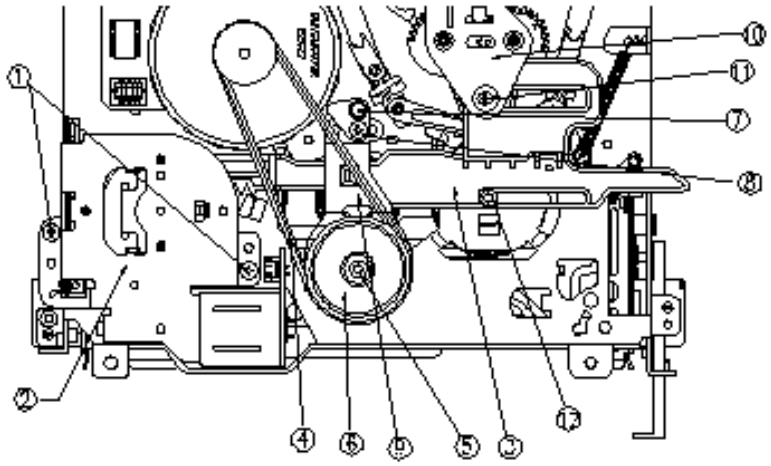



Figure 3-7

# 4. MECHANICAL ADJUSTMENT

## 1. MECHANICAL CHECKS

Check the following before the disassembly, replacement and assembly of the Deck.

1) Check the assembling standard of the Deck Mechanism at the EJECT Mode.
2) Before and after assembling the L/C Bracket Total Ass'y, check the assembling location for the Cam Switch, the F/L Rack and the Cam Gear. (Refer to the Picture 4-1)
3) Check the assembling location of the R Loading Ass'y and L Loading Ass'y to assemble Loading Gear Bracket Ass'y. (Refer to the Picture 4-2)

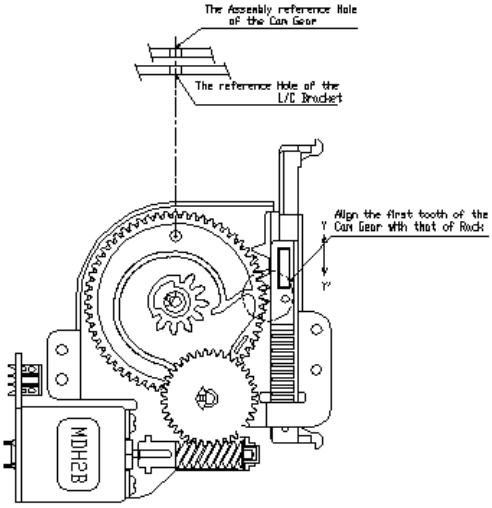

The Assembly reference Hole of the Cam Gear
The reference Hole of the L/C Bracket
Align the first tooth of the Cam Gear with that of Rack
M10H2B

Figure 4-1. The Assembly Reference of L/C BRKT TOTAL ASS'Y

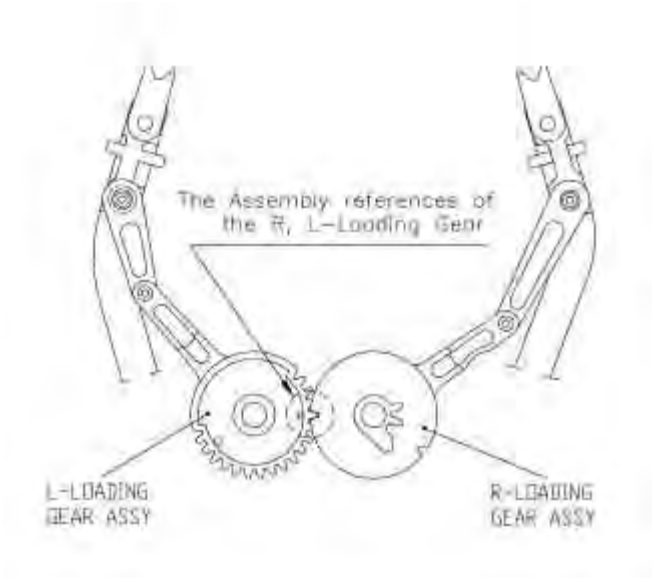



Figure 4-2 The Assembly Reference of R-LOADING ASS'Y and L-LOADING ASS'Y

## .2. MODE SETTING METHOD

1) Turn the power switch on while the F/Loading Ass'y is assembled.
2) When you turn the Worm Gear 2 or 3 times by manual, it starts loading and moves to the PLAY/STOP BY Mode.
3) Push any button of the mode you want to set.
4) Unplug when the mode you selected is on.
5) F/Loading Ass'y should be disassembled and assembled at the EJECT mode.

## 3. MEASUREMENT OF PRESSING FORCE FOR THE PINCH ROLLER

1) Gently insert a cassette tape into the deck for Loading and push the PLAY button to run the tape.
2) Connect a Push and Pull Gauge to the lower part of the Pinch Lever Total Ass'y and pull it slowly to the ⓐ direction.(Refer to Picture 4-3)
3) Check the value of the gauge when the tape stops. (Specification : 1.2±0.2kg)

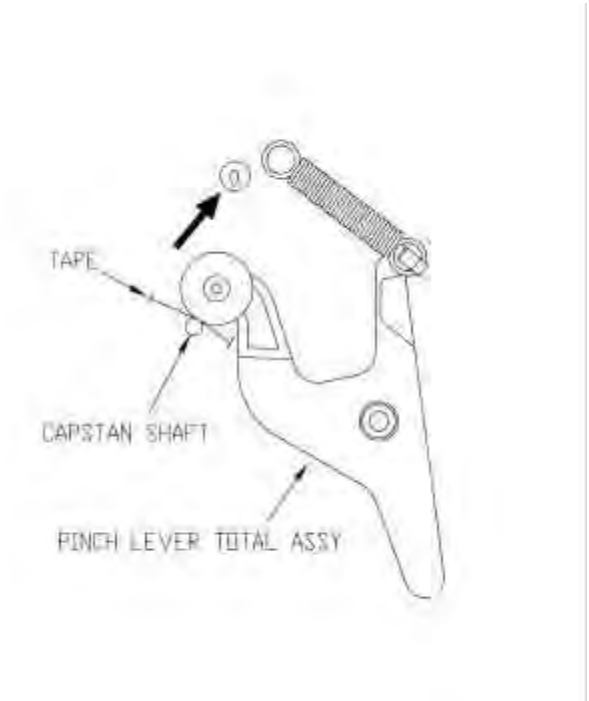



Figure 4-3 The Measurement of the Pressure of PINCH ROLLER

## 4. MEASUREMENT AND ADJUSTMENT OF BACK TENSION

1) Insert a T-120 cassette tape that winds tape equally on the supply side and T/Up side. And push the PLAY button and wait until the operation becomes stable. (About 10 to 20 seconds)
2) Set the Tentelometer as shown in the picture 4-4, and measure the value of tension. (Specification : 20 28g)
3) When the value is out of the specification, move the spring hook as shown in the Fig. 4-4 to adjust the value of tension.

Notes :

* Make sure that the probe of Tentelometer is adequately attached to the tape.
* The Tentelometer is so sensitive that it is recommended to measure about 3 times.

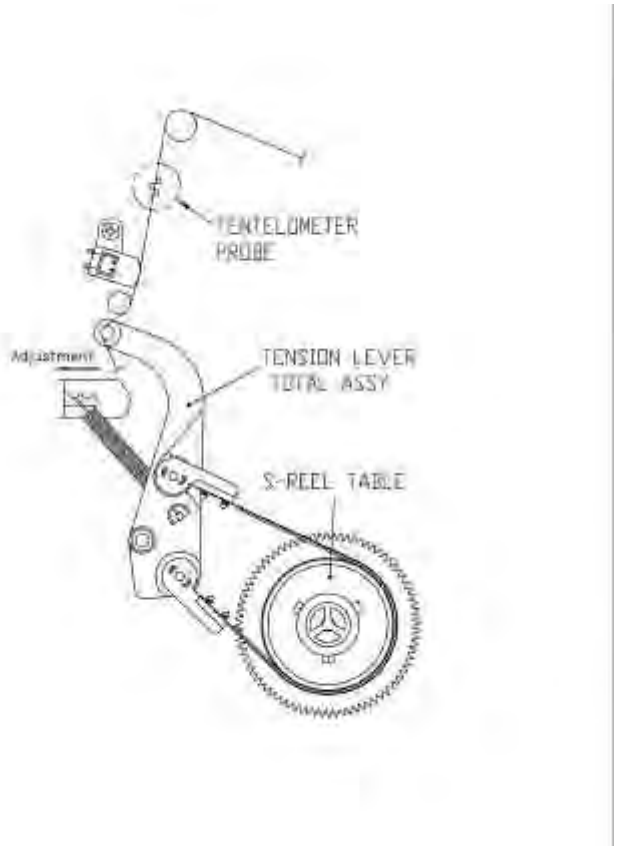


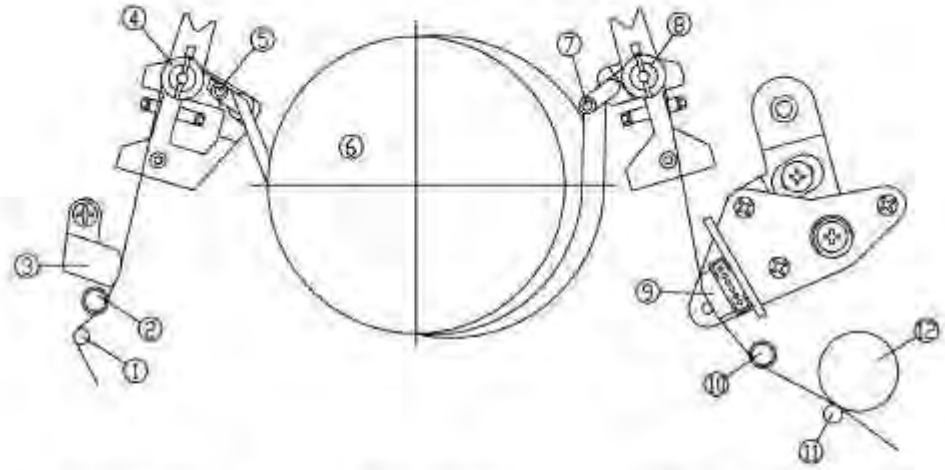

**Figure 4-4 Measurement and Adjustment of the Back Tension**

# 5. ADJUSTMENT OF TAPE TRANSPORTING SYSTEM

Since the Tape Transporting System is usually set at the factory before the shipment, it is not necessary to djust or check always. However you should check and adjust the Tape Transporting System in these following cases.

- · There is some noise on the screen during the playback.
- · The tape has been damaged.
- · The components of the Tape Transporting System have been replaced.

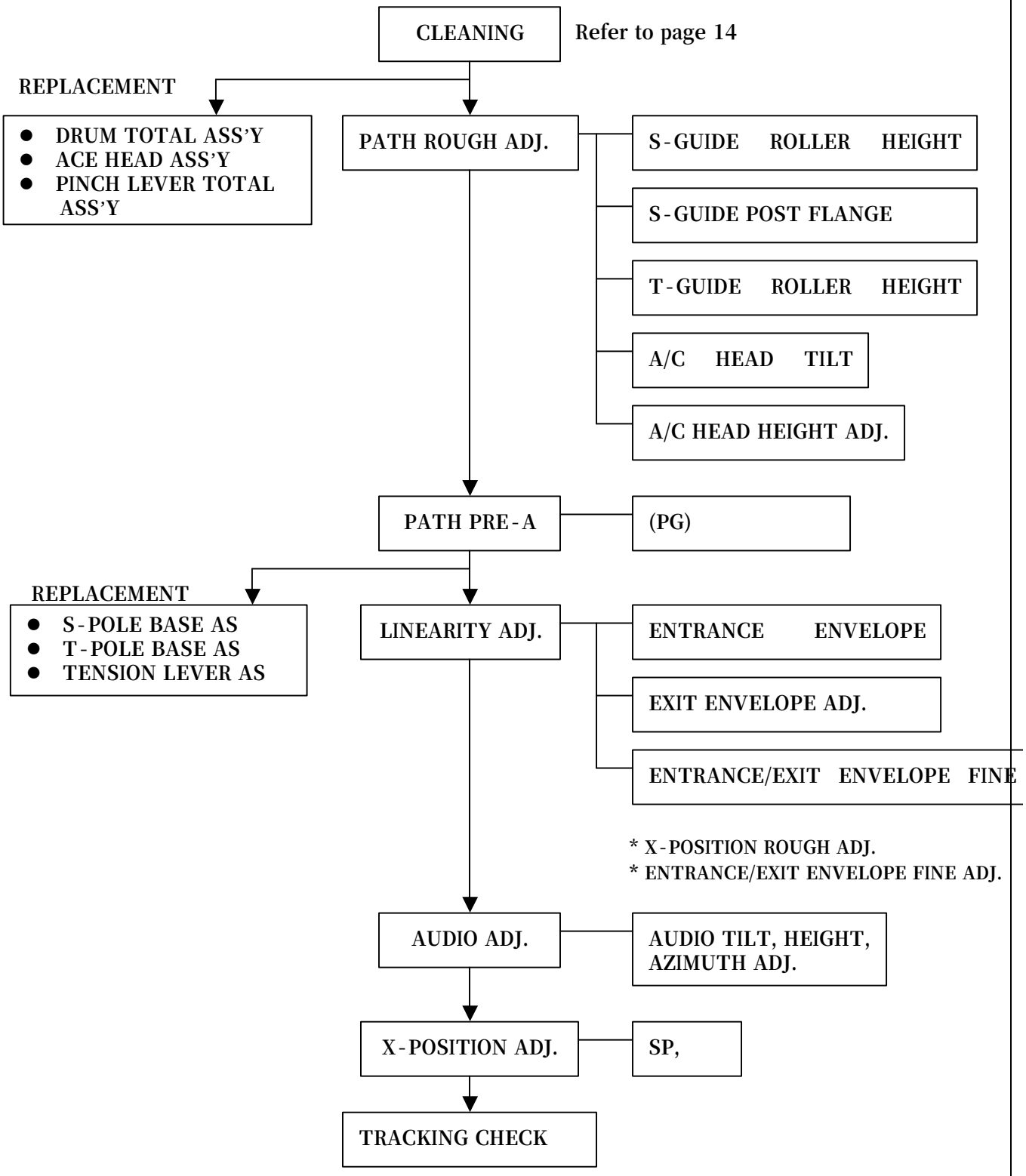
## 1. SCHEMATIC DIAGRAM OF TAPE TRANSPORTING SYSTEM




| | | |
|---|---|---|
| ① SLANT POLE | ⑤ SLANT POLE | ⑨ ACE HEAD |
| ② TAPE GUIDE POST | ⑥ DRUM | ⑩ TAPE GUIDE POST |
| ③ FE HEAD | ⑦ SLANT POLE | ⑪ CAPSTAN SHAFT |
| ④ GUIDE ROLLER | ⑧ GUIDE ROLLER | ⑫ PINCH ROLLER |

Figure 5-1

## 2. ADJUSTMENT FLOW



## 3. ADJUSTMENT PROCEDURES

### 1) ROUGH ADJUSTMENT OF THE TAPE PATH

Insert E-160 cassette tape into the Deck and push the PLAY button.

1-1) Height Adjustment for the S/T-GuideRoller

A. Make sure if the tape is folded or cracked between the tape and the upper Flange of S/T-Guide Roller and the entrance/exit side Lead Line of Drum while the tape is running.

B. If there is any crack or fold on the tape, adjust for smooth run of the tape by rotating the S/T-Guide Roller.

1-2) Tilt Adjustment of the Ace Head

A. Check the running condition of the tape at the Lower Flange of the Tape Guide Post(T-Side).

B. If the running condition of tape is abnormal, adjust by the Tilt adjusting Screw(② of Figure 5-2) as shown in the Figure 5-2 for a smooth run of tape.

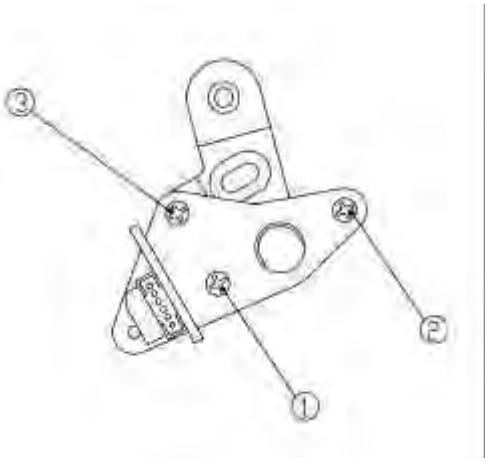



Figure 5-2

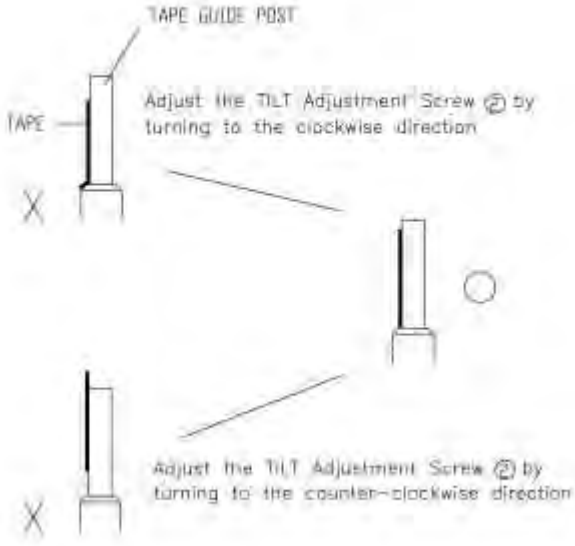

TAPE GUIDE POST
TAPE
Adjust the TILT Adjustment Screw ② by turning to the clockwise direction
Adjust the TILT Adjustment Screw ② by turning to the counter-clockwise direction

Figure 5-3

### 1-3) Height Adjustment of the ACE HEAD

A. Check if the gap between the lower part of tape and the lower part of CTL Head is 0.25 ㎜.

B. If the gap is more than 0.25 ㎜, turn the screw to the counter-clockwise direction as ①→②→③ step.

C. If the gap is less than 0.25 ㎜, turn the screw to the clockwise direction as ①→②→③ step.

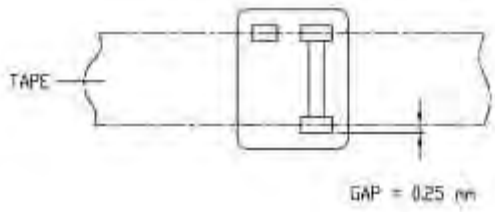



Figure 5-4

## 2) PRE-ADJUSTMENT OF THE PATH (ADJUSTMENT OF PG)

A. Connect the Channel 1(CH1) of the Oscilloscope to TP01-3(Head Switching Pulse) and CH2 to the VIDEO OUT. And align the Tracking VR on the center.

B. Playback the Stairstep Signal Tape(DN 2).

C. Turn the PG Volume and adjust the gap between the Switching signal and the V-Sync signal to be 6.5H±0.5H.

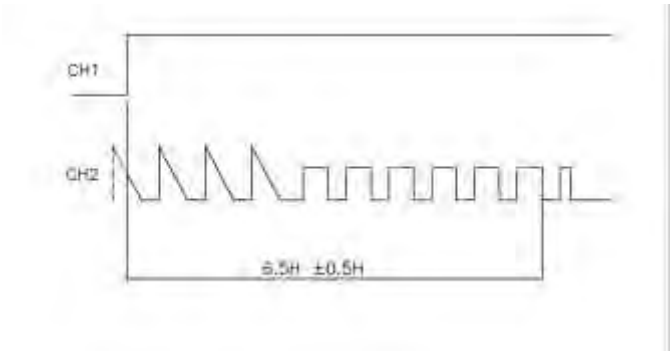



Figure 5-5

## 3) ADJUSTMENT OF RF STRAIGHTNESS

Connect the Channel 1(CH1) of the Oscilloscope to the TP01-2(CTL Pulse) and CH2 to the TP01-4(Envelope Wave) and EXT. Trigger to the TP01-3(Switching Pulse). And then, playback the test tape of the SP Mode.

### 3-1) Adjustment of S & T side

A. Adjust the Tracking VR to maximize the FM signal of the test tape.

B. Make the entrance and exit side Envelope Wave same as the Picture 5-6 by adjusting the S/T-Guide Roller (④ and ⑧ of Picture 5-1).

### 3-2) Rough Adjustment of the X-Position

A. Turn the Tracking VR to align it on the center.

B. Loosen the A/C Head Screws(④&⑤) of Picture 5-2 by turning about 90 ° 120 ° .

C. Maximize the Envelope Wave of the Oscilloscope by turning the A/C Head Total Ass'y with a (-) driver as shown in the picture 5-2.

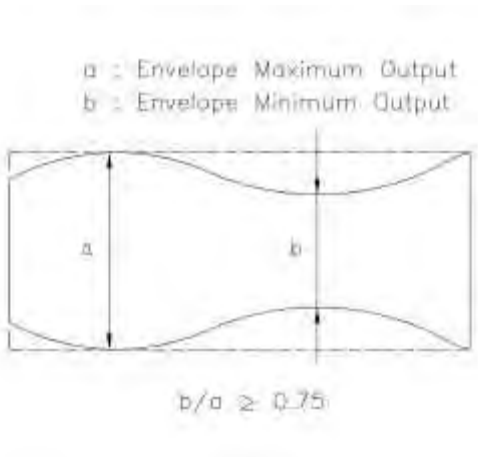



Figure 5-6

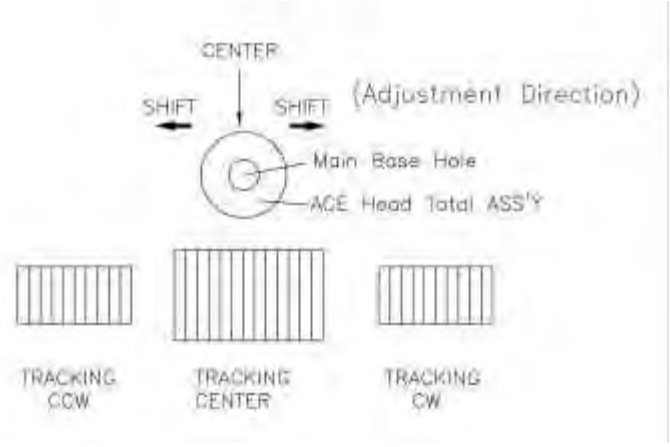



Figure 5-7

### 3-3) Fine Adjustment of Entrance/Exit side

A. Check if the Envelope Wave of the Oscilloscope changes constantly while turning the Tracking VR to the CW/CCW direction.

B. If the Envelop Wave of the Oscilloscope at the entrance or/and the exit side changes unsteadily as shown in the picture 5-8 and 5-9, adjust repeatedly the S/T-Guide Roller where the wave is not flat.

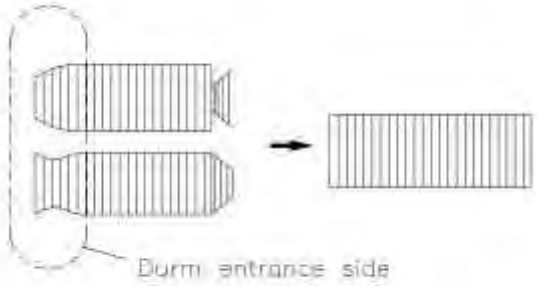



Figure 5-8

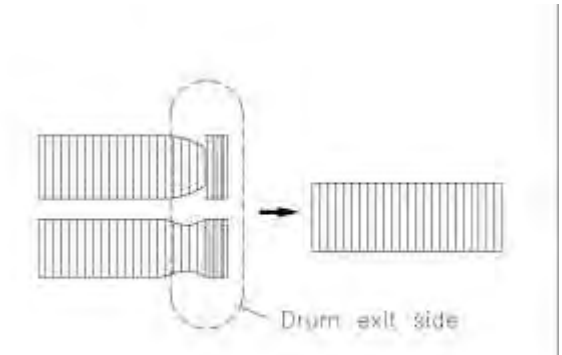



Figure 5-9

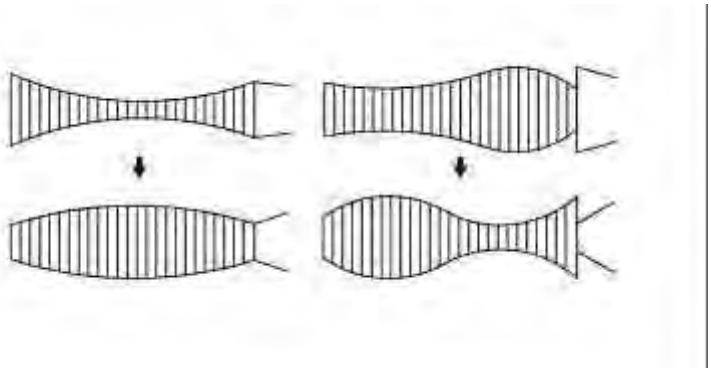


Figure 5-10

## 4) THE ADJUSTMENT OF THE AUDIO SIGNAL

Before adjusting the Audio, play the tape and check if there is any fold on the tape at the lower part of the Tape Guide Post(T-side).

### 4-1) Tilt and Height Adjustment of the Audio

A. Connect the AUDIO OUTPUT to an Audio Level Meter.

B. Playback the SP-1/SN-1 and check the output of the AUDIO. (Specification : Minimum, Output -4.5 -8.5dBm)

C. If the 1MHz output is below the gauge value, adjust the Tilt and the Height of the Ace Head again according to the same method as 1-2) and 1-3).

### 4-2) Adjustment of the Audio Azimuth

A. Play the SP-2/SN-2 tape while connecting the AUDIO OUTPUT to an Audio Level Meter.

B. Adjust to maximize the output of the Audio by turning the A/C Head Screw(② of Figure 5-2)

* Specifications ·Minimum Output : -8.5 -12.5dBm
· The output difference between 1MHz and 7MHz : +2 -4dBm
· The Level variation of 7MHz Audio : within 2dBm

C. Check if there is any severe fluctuation or top-down vibration of the tape between the T-Guide Roller and the A/C Head while playing the tape after adjustment. If there is any problem, readjust the Audio.

D. Check the condition of the Envelope Wave after adjusting. If there is any problem, conducts the fine readjustment of the entrance and exit side according to the same procedure as 3-3).

## 5) ADJUSTMENT OF X-POSITION

A. Connect the Channel 1(CH1) of the Oscilloscope to the TP01-2(CTL Pulse), and CH2 to the TP01-4(Envelope), and EXT. Trigger to the TP01-3(Switching Pulse).

B. Playback the test tape of the SP Mode after aligning the Tracking VR on the center.

C. Turn and adjust the A/C Head Total Ass'y with a (-) driver (refer to the picture 5-2) to make the Envelope Wave same as the picture 5-12 while turning the Tracking VR to the CW/CCW direction.

D. If the above said directional feature is not found, readjust from step "B".

E Check if the output of DP-2/DN-2 6㎑ is maximum after adjusting the X-Position.

F. If every step is acceptable, apply the lock paint to the A/C Head Screw ①, ②, and ③.

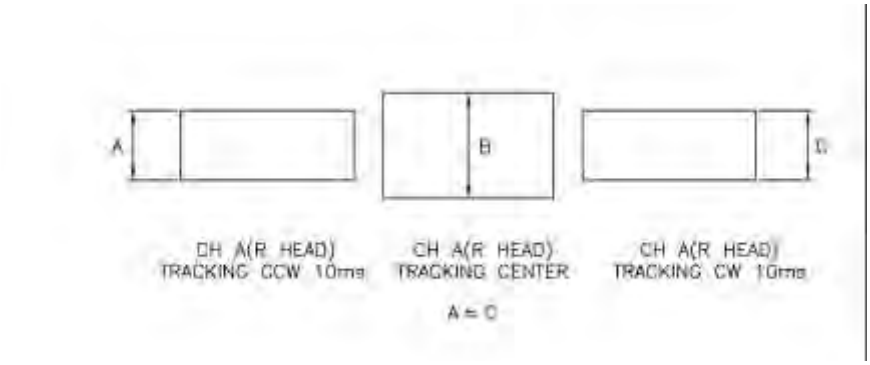



Figure 5-11

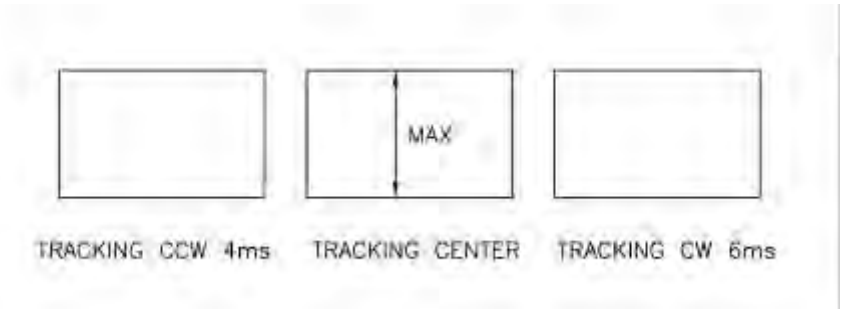
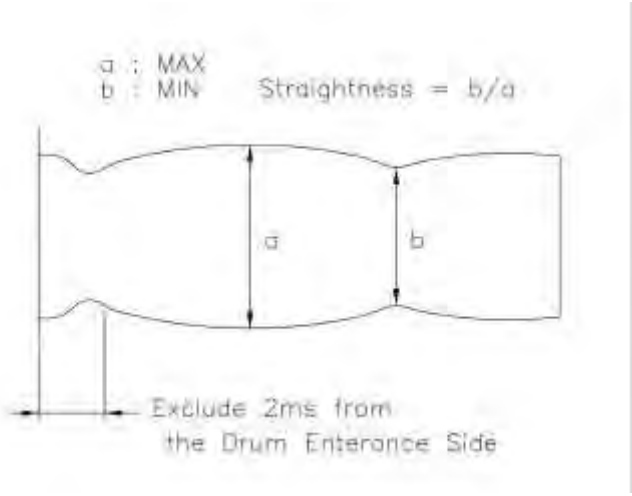



Figure 5-12

## 6) CHECKING OF THE TRACKING ADJUSTMENT



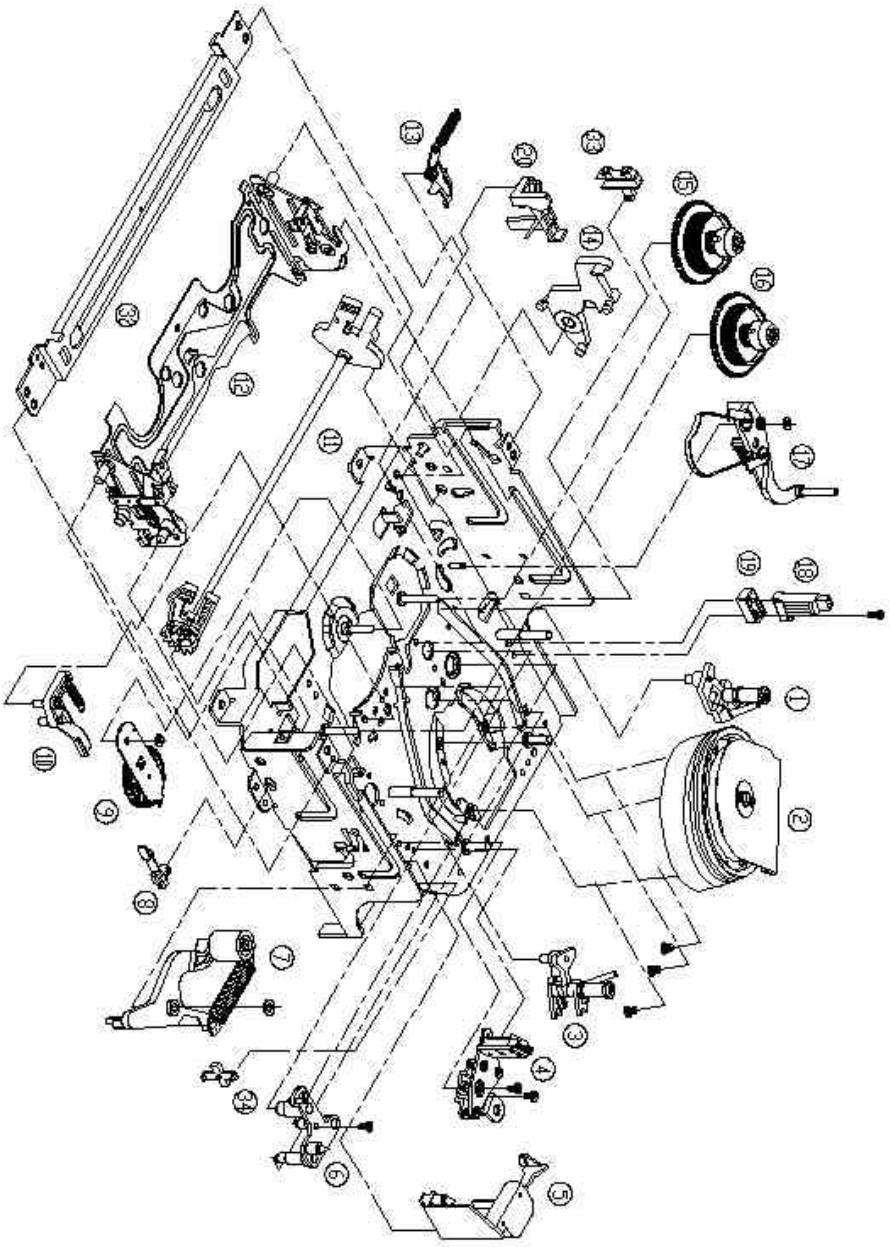

| Mode | Tape Used | Checking Item | Tracking VR Position | | | |
|---|---|---|---|---|---|---|
| | | | CCW 6ms | CCW 4ms | CENTER | CW 6ms |
| SP | SP-2 (SN-2) | Straightness | 4 : 3 | | 4 : 3.5 | 4 : 3 |
| | | Noise | None | | None | None |

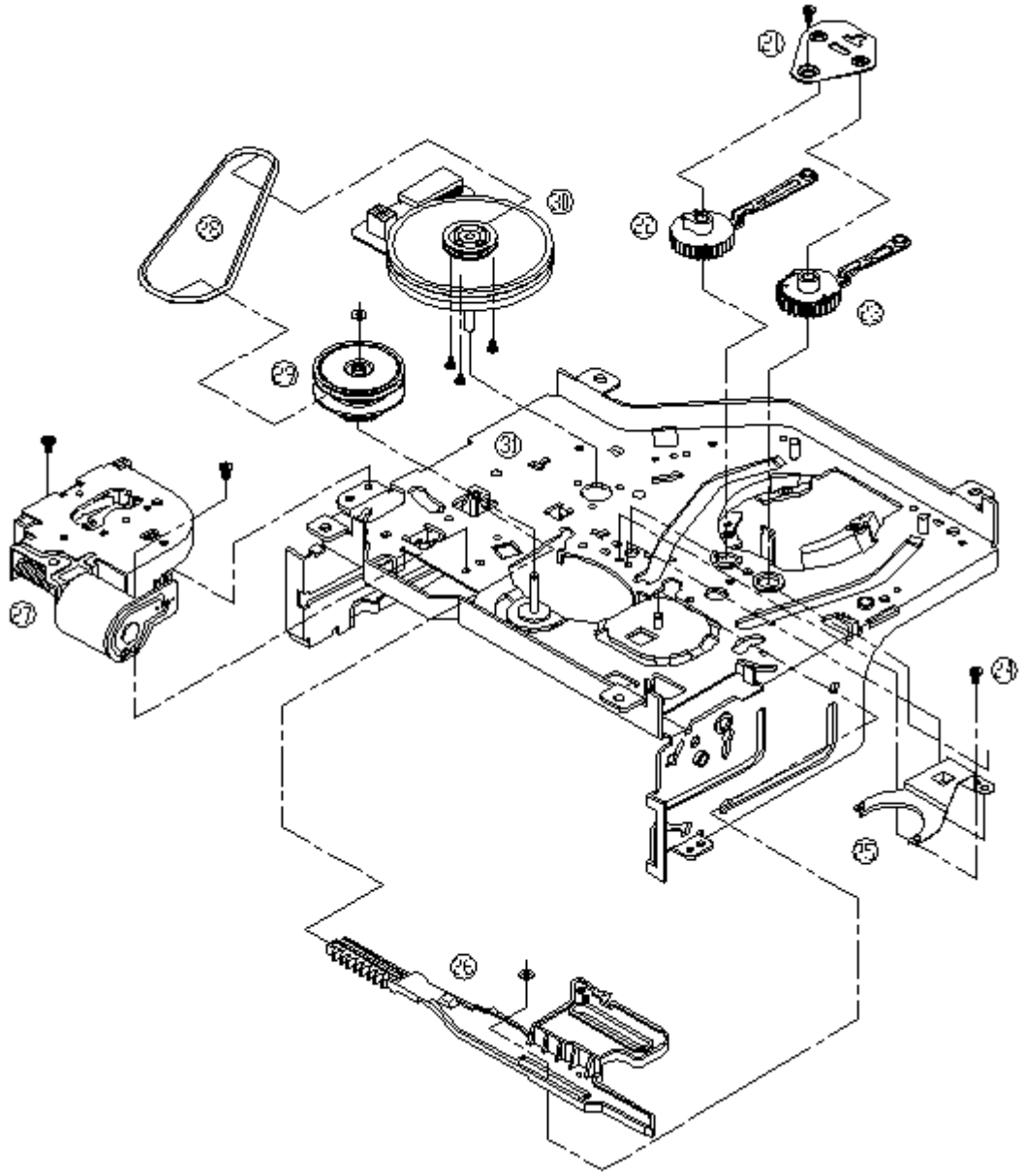
Figure 5 – 13

### 7) FINAL INSPECTION

Make sure no tape wrinkle is caused at each Guide Roller and Post.

## 1. Exploding View of the Deck





## 2. Part List

| NO. | STOCK NO. | PART NAME | Q'TY | REMARKS |
|---|---|---|---|---|
| 1 | 97SA255600 | S-SLANT POLE AS | 1 | |
| 2 | 97SA282001 | DRUM TOTAL AS | 1 | NTSC |
| | 97SA28117B | DRUM TOTAL AS | 1 | PAL |
| 3 | 97SA255700 | T-SLANT POLE AS | 1 | |

| | | | | |
|---|---|---|---|---|
| 4 | 962SA005-- | A/C HEAD T/T AS | 1 | |
| 5 | 97S1800500 | CST CAP OPENER | 1 | |
| 6 | 97SA260001 | CST GUIDE BRKT AS | 1 | |
| 7 | 97SA256601 | PINCH LEVER T/T AS | 1 | |
| 8 | 97S2301900 | SHAFT HOLDER | 1 | |
| 9 | 97SA25690A | IDLER PLATE AS | 1 | |
| 10 | 97SA257200 | T-SUB BRAKE AS | 1 | |
| 11 | 97SA257300 | LOADING LEVER AS | 1 | |
| 12 | 97SA257400 | CST HOLDER AS | 1 | |
| 13 | 97SA257100 | S-SUB BRAKE AS | 1 | |
| 14 | 97S1800600 | F/L DOOR OPENER | 1 | |
| 15 | 97S2912500 | S-REEL TABLE | 1 | |
| 16 | 97S2912600 | T-REEL TABLE | 1 | |
| 17 | 97SA257000 | TENSION LEVER T/T AS | 1 | |
| 18 | 97S8009500 | FE HEAD | 1 | |
| 19 | 97S2301800 | FE HEAD HOLDER | 1 | |
| 20 | 97S2609201 | REC S/W LEVER | 1 | |
| 21 | 97S2401200 | LOADING GEAR BRKT | 1 | |
| 22 | 97SA255800 | L-LOADING AS | 1 | |
| 23 | 97SA255900 | R-LOADING AS | 1 | |
| 24 | 97S2606900 | CLUTCH LEVER | 1 | |
| 25 | 97SA261700 | MAIN PLATE AS(F) | 1 | |
| 26 | 97SA274301 | L/C BRKT T/T AS(S3) | 1 | |
| 27 | 97S5500500 | REEL BELT | 1 | |
| 28 | 97SA262100 | REEL GEAR T/T AS(F) | 1 | |
| 29 | 97S8101600 | CAPSTAN MOTOR | 1 | |
| 30 | 97SA255500 | MAIN BASE AS | 1 | |
| 31 | 97S0903100 | TOP PLATE(C) | 1 | |
| 32 | 97SA318300 | REFLECTOR HOLDER-L AS | 1 | |
| 33 | 97SA318400 | REFLECTOR HOLDER-R AS | 1 | |
| 34 | 97S2610800 | LED PRISM LINK | 1 | |
| 35 | 324SO020-- | HOLDER GUIDE SPG | 1 | |

## 3. Spare Part List

| NO. | PART NAME | STOCK NO. | DESCRIPSION | Q'TY | REMARKS |
|---|---|---|---|---|---|
| 1 | DRUM TOTAL AS | 97SA282001 | | 3 | NTSC |
| | DRUM TOTAL AS | 97SA28117B | | 3 | PAL |
| 2 | CAPSTAN MOTOR | 97S8101600 | DMVCMC07D | 3 | |
| 3 | L/C BRKT T/T AS(S3) | 97SA274301 | | 3 | |
| 4 | REEL BELT | 97S5500500 | CR700 | 3 | |
| 5 | IDLER PLATE AS | 97SA25690A | | 3 | |
| 6 | S-REEL TABLE AS | 97SA256700 | | 1 | |
| 7 | T-REEL TABLE AS | 97SA256800 | | 1 | |
| 8 | T-SUB BRAKE AS | 97SA257200 | | 3 | |
| 9 | BAND BRAKE AS | 97SA313200 | | 1 | |
| 10 | MAIN PLATE AS(F) | 97SA261700 | | 3 | |
| 11 | L-LOADING AS | 97SA255800 | | 1 | |
| 12 | PINCH LEVER T/T AS | 97SA256601 | | 3 | |
| 13 | A/C HEAD T/T AS | 962SA005- - | | 3 | |
| 14 | FE HEAD | 97S8009500 | HVFHF0004AK | 3 | |
| 15 | REEL GEAR T/T AS(F) | 97SA262100 | | 3 | |

## 3) ADJUSTMENT OF RF STRAIGHTNESS

Connect the Channel 1(CH1) of the Oscilloscope to the TP01-2(CTL Pulse) and CH2 to the TP01-4(Envelope Wave) and EXT. Trigger to the TP01-3(Switching Pulse). And then, playback the test tape of the SP Mode.

### 3-1) Adjustment of S & T side

A. Adjust the Tracking VR to maximize the FM signal of the test tape.

B. Make the entrance and exit side Envelope Wave same as the Picture 5-6 by adjusting the S/T-Guide Roller (④ and ⑧ of Picture 5-1).

### 3-2) Rough Adjustment of the X-Position

A. Turn the Tracking VR to align it on the center.

B. Loosen the A/C Head Screws(④&⑤) of Picture 5-2 by turning about 90 ° 120 ° .

C. Maximize the Envelope Wave of the Oscilloscope by turning the A/C Head Total Ass'y with a (-) driver as shown in the picture 5-2.

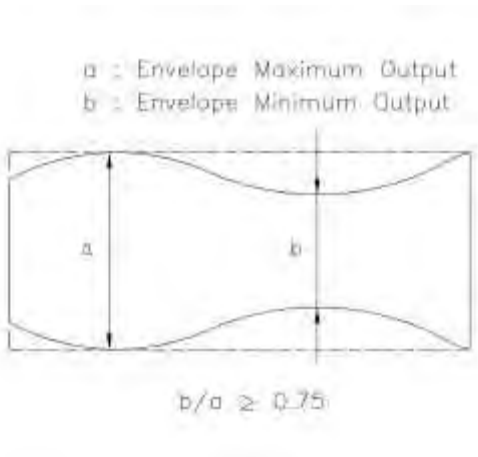



Figure 5-6

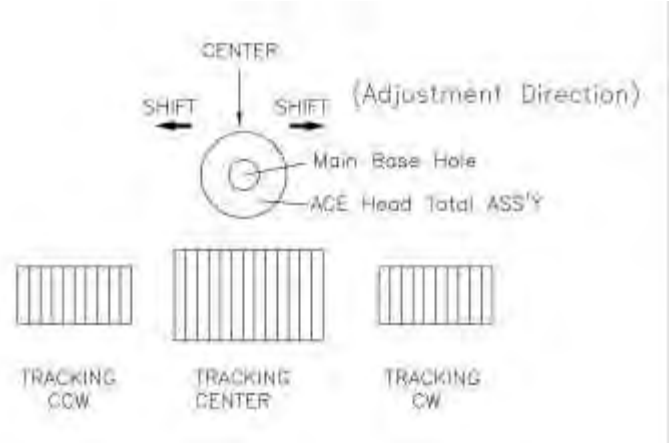



Figure 5-7

### 3-3) Fine Adjustment of Entrance/Exit side

A. Check if the Envelope Wave of the Oscilloscope changes constantly while turning the Tracking VR to the CW/CCW direction.

B. If the Envelop Wave of the Oscilloscope at the entrance or/and the exit side changes unsteadily as shown in the picture 5-8 and 5-9, adjust repeatedly the S/T-Guide Roller where the wave is not flat.

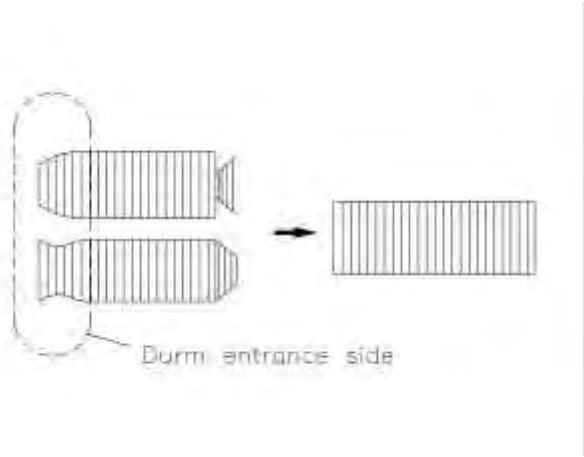



Figure 5-8

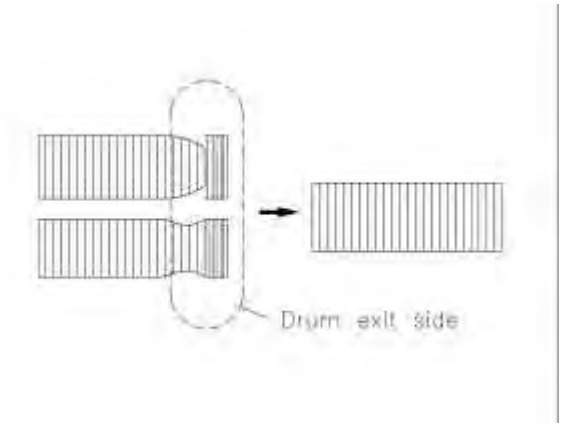



Figure 5-9

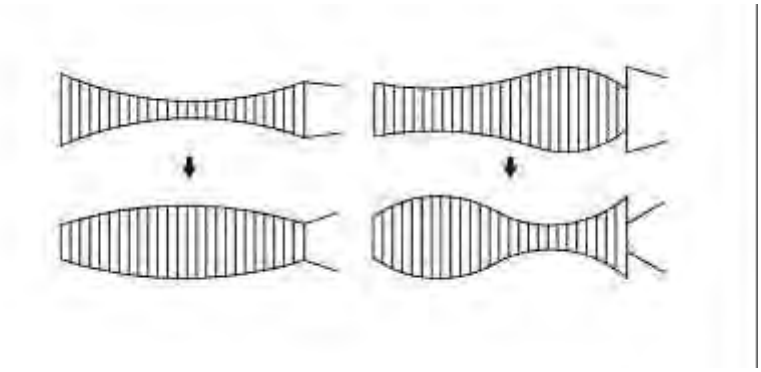


Figure 5-10

## 4) THE ADJUSTMENT OF THE AUDIO SIGNAL

Before adjusting the Audio, play the tape and check if there is any fold on the tape at the lower part of the Tape Guide Post(T-side).

### 4-1) Tilt and Height Adjustment of the Audio

A. Connect the AUDIO OUTPUT to an Audio Level Meter.

B. Playback the SP-1/SN-1(Color Bar) and check the output of the AUDIO. (Specification : Minimum, Output -4.5 -8.5dBm)

C. If the 1MHz output is below the gauge value, adjust the Tilt and the Height of the Ace Head again according to the same method as 1-2) and 1-3).

### 4-2) Adjustment of the Audio Azimuth

A. Play the SP-2/SN-2 tape(Stairstep: 6kHz) while connecting the AUDIO OUTPUT to an Audio Level Meter.

B. Adjust to maximize the output of the Audio by turning the A/C Head Screw(② of Figure 5-2)

* Specifications ·Minimum Output : -8.5 -12.5dBm
· The output difference between 1MHz and 6MHz : +2 4dBm
· The Level variation of 6MHz Audio : within 1dBm

C. Check if there is any severe fluctuation or top-down vibration of the tape between the T-Guide Roller and the A/C Head while playing the tape after adjustment. If there is any problem, readjust the Audio.

D. Check the condition of the Envelope Wave after adjusting. If there is any problem, conducts the fine readjustment of the entrance and exit side according to the same procedure as 3-3).

## 5) ADJUSTMENT OF X-POSITION

A. Connect the Channel 1(CH1) of the Oscilloscope to the TP01-2(CTL Pulse), and CH2 to the TP01-4(Envelope), and EXT. Trigger to the TP01-3(Switching Pulse).

B. Playback the test tape of the SP Mode after aligning the Tracking VR on the center.

C. Turn and adjust the A/C Head Total Ass'y with a (-) driver (refer to the picture 5-2) to make the Envelope Wave same as the picture 5-12 while turning the Tracking VR to the CW/CCW direction.

D. Playback the test tape SN-2E(EP Mode)/SP-2 to check if the its directional feature is same as the picture 5-13. (There should be no major change of wave or screen noise from the CCW 4ms to the CW 6ms range of the Tracking Volume.)

E. If the above said directional feature is not found, readjust from step "B".

F. Check if the output of DP-2/DN-2 6㎑ is maximum after adjusting the X-Position.

G. If every step is acceptable, apply the lock paint to the A/C Head Screw ①, ②, and ③.

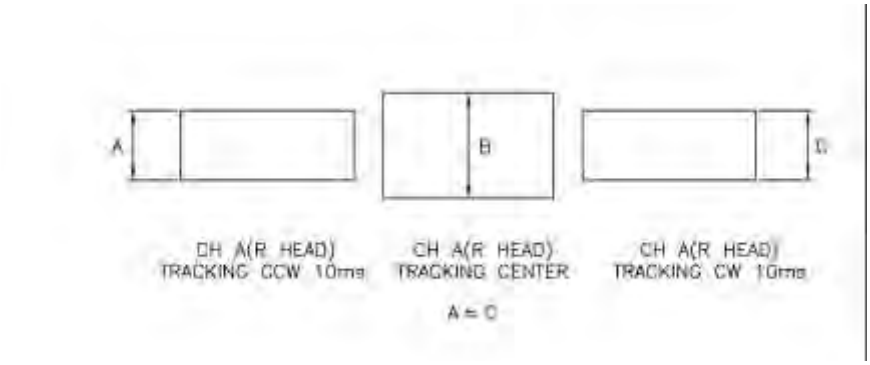



Figure 5-11

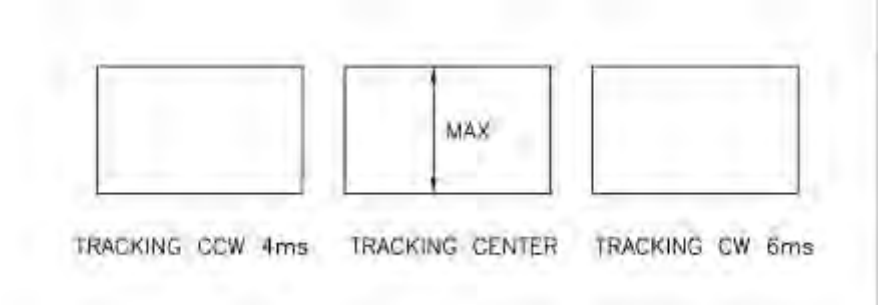
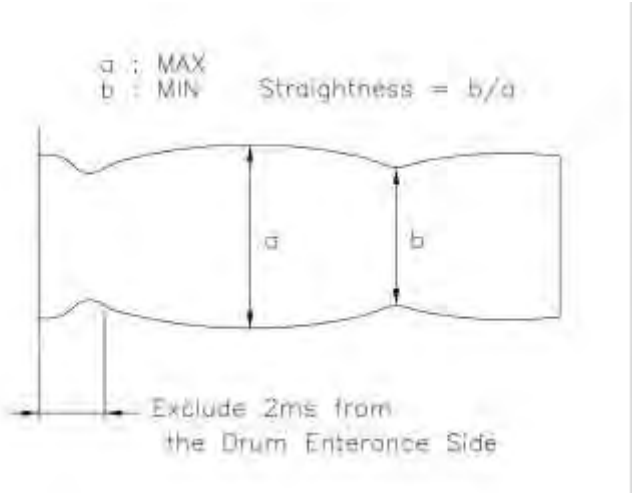



Figure 5-12

## 6) CHECKING OF THE TRACKING ADJUSTMENT




| Mode | Tape Used | Checking Item | Tracking VR Position | | | |
|---|---|---|---|---|---|---|
| | | | CCW 6ms | CCW 4ms | CENTER | CW 6ms |
| SP | SP-2 (SN-2) | Straightness | 4 : 3 | | 4 : 3.5 | 4 : 3 |
| | | Noise | None | | None | None |
| EP | SN-2E | Straightness | | 4 : 3 | 4 : 3.5 | 4 : 3 |
| | | Noise | | None | None | None |

Figure 5 – 13

## 7) FINAL INSPECTION

Make sure no tape wrinkle is caused at each Guide Roller and Post.